

## **Top 10 Challenges Confronting** the Insurance Industry Today? Trends, Challenges & Opportunities **Federation of Defense and Corporate Counsel New York, AL October 22, 2015** Download at www.iii.org/presentations

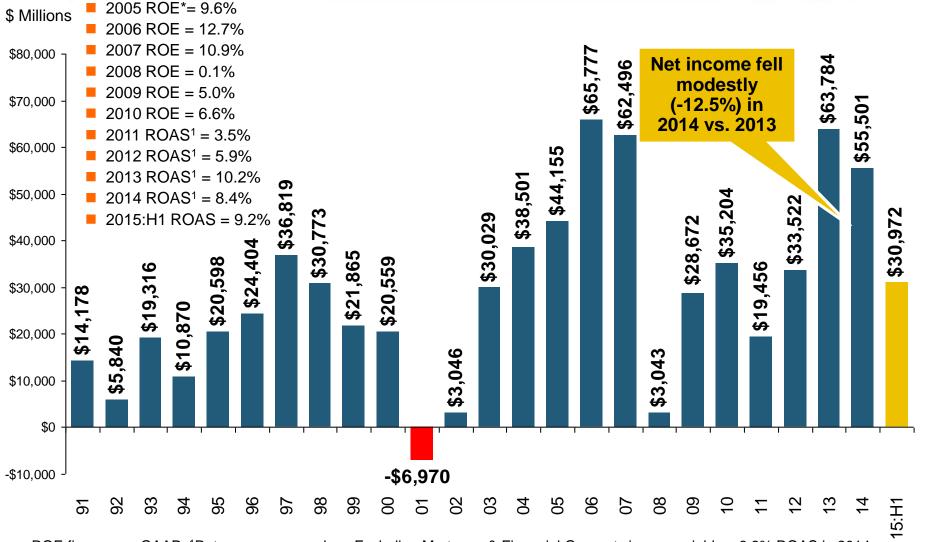
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## 1. Insurance Industry Financial Performance

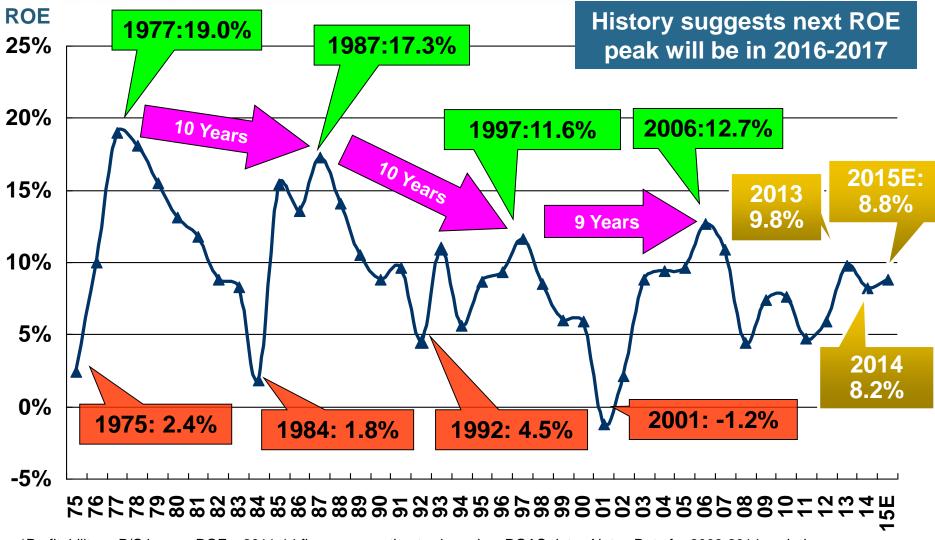
# 2014 Was a Reasonably Good Year 2015: A Repeat of 2014?

#### P/C Industry Net Income After Taxes 1991–2015:H1



•ROE figures are GAAP; <sup>1</sup>Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 8.2% ROAS in 2014, 9.8% ROAS in 2013, 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

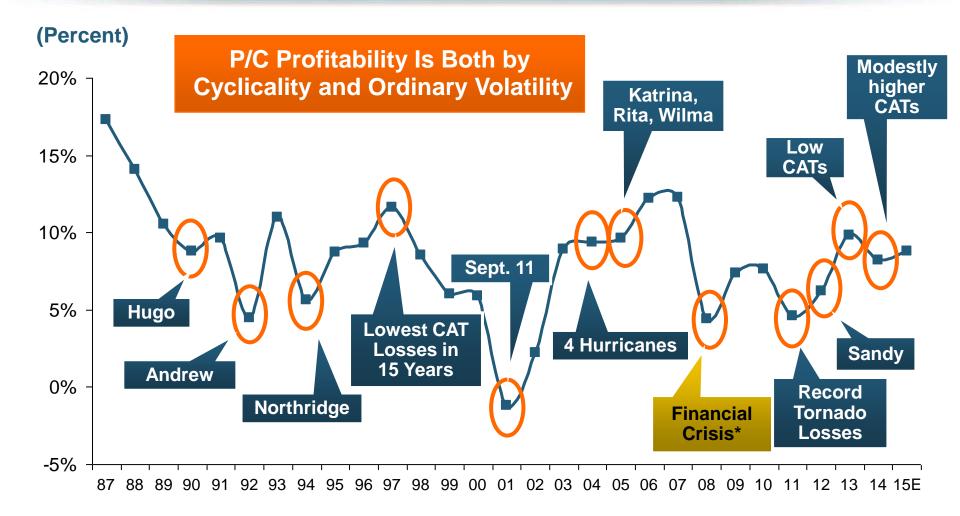
### Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2015E



\*Profitability = P/C insurer ROEs. 2011-14 figures are estimates based on ROAS data. Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers.

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

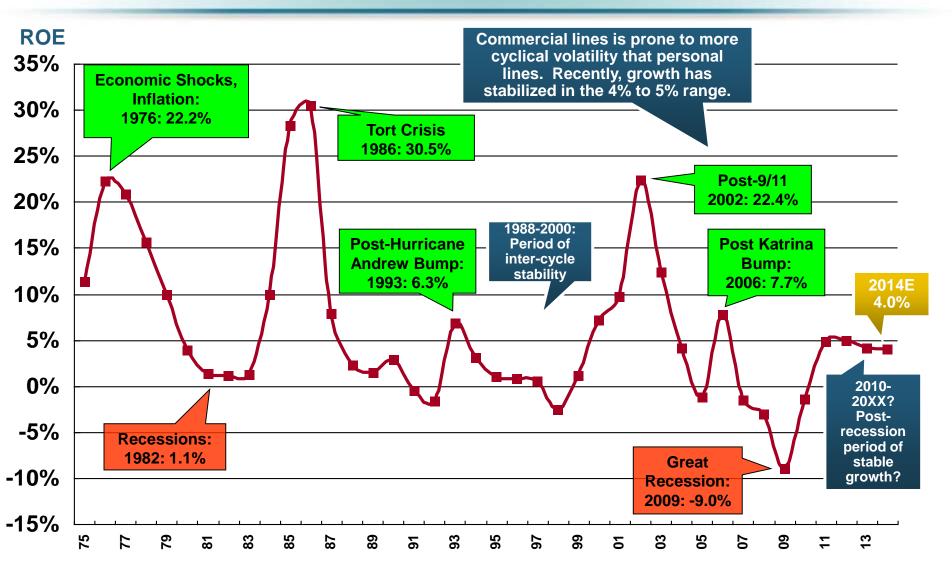
# ROE: Property/Casualty Insurance by Major Event, 1987–2015E



\* Excludes Mortgage & Financial Guarantee in 2008 – 2014. Sources: ISO, *Fortune*: Insurance Information Institute. NSURANCE

# Commercial Lines NPW Premium Growth: 1975 – 2014E

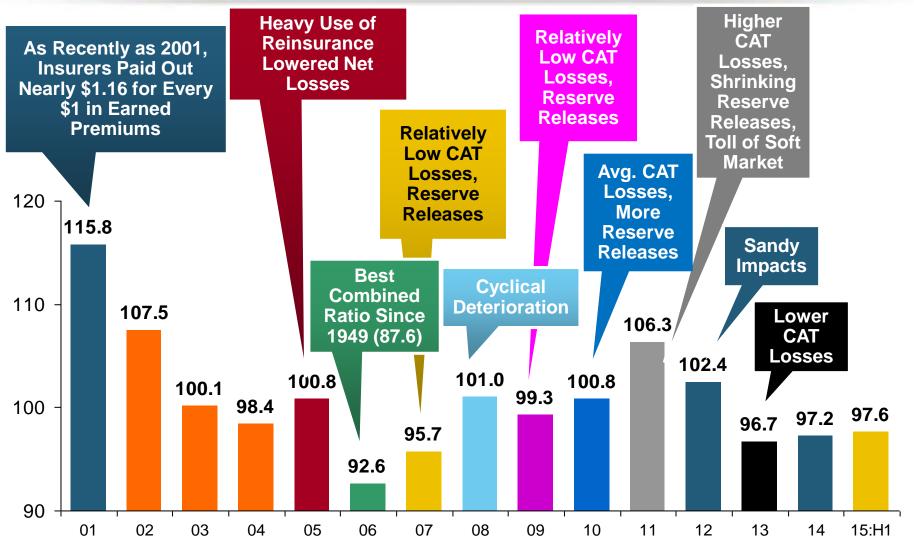




Note: Data include state funds beginning in 1998. Source: A.M. Best; Insurance Information Institute.

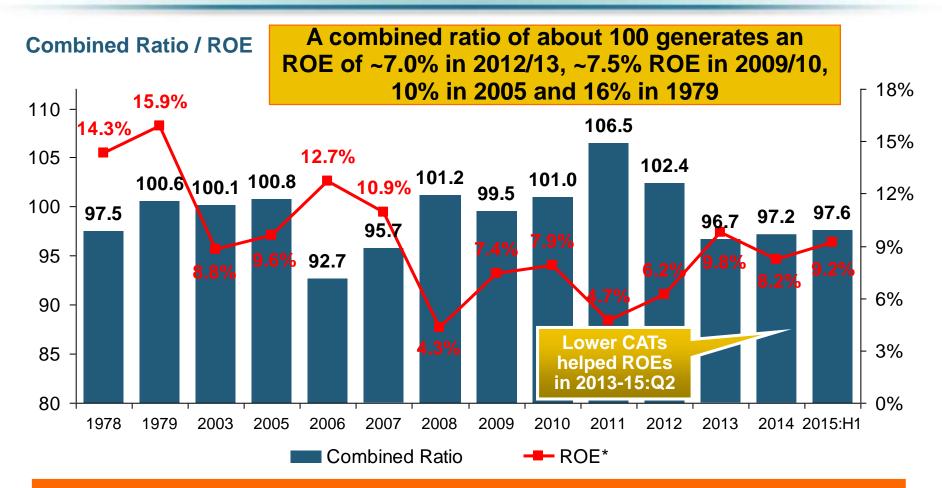
#### P/C Insurance Industry Combined Ratio, 2001–2015:H1\*





\* Excludes Mortgage & Financial Guaranty insurers 2008--2014. Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2; 2013: = 96.1; 2014: = 97.0. Sources: A.M. Best, ISO.

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

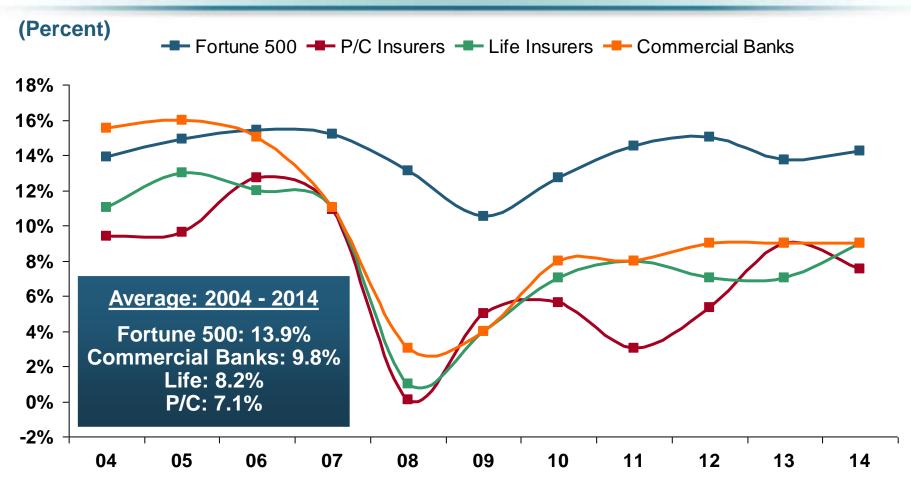


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#### Combined Ratios Must Be Lower in Today's Depressed Investment Environment to Generate Risk Appropriate ROEs

\* 2008 -2014 figures are return on average surplus and exclude mortgage and financial guaranty insurers. 2014 combined ratio including M&FG insurers is 97.0; 2013 = 96.1; 2012 =103.2, 2011 = 108.1, ROAS = 3.5%.
 Source: Insurance Information Institute from A.M. Best and ISO Verisk Analytics data.

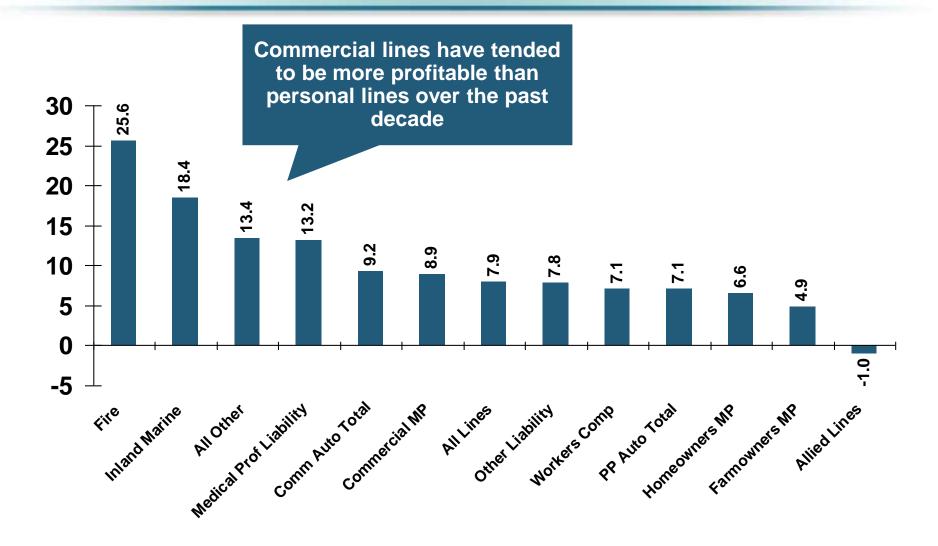
### Return on Equity by Financial Services Sector vs. Fortune 500, 2004-2014\*



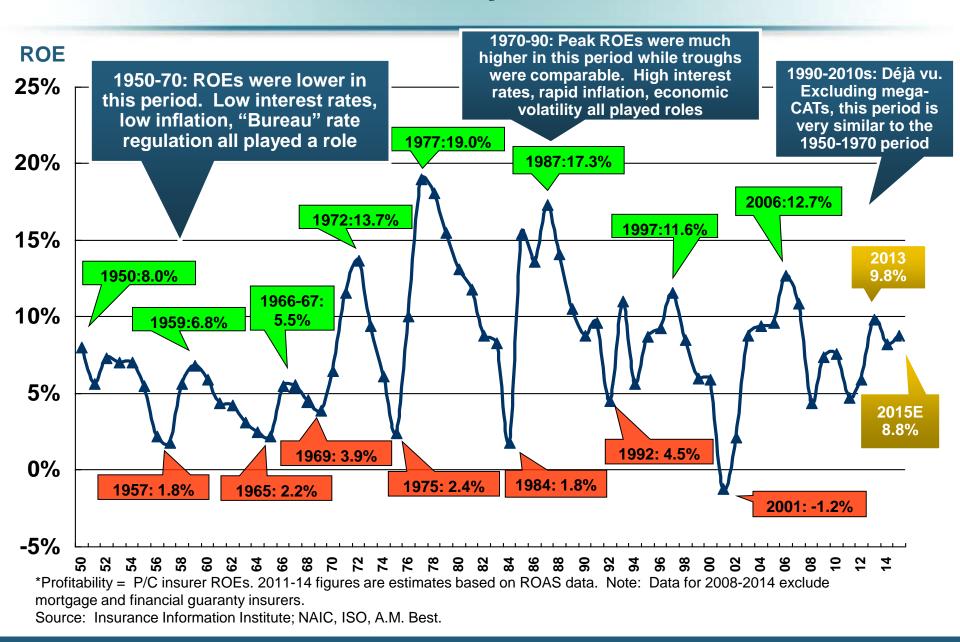
#### Banks and Insurers Have Substantially Underperformed the Fortune 500 Since the Financial Crisis

# Return on Net Worth (RNW) All Lines: 2004-2013 Average





#### Back to the Future: Profitability Peaks & Troughs in the P/C Insurance Industry, 1950 – 2015E\*

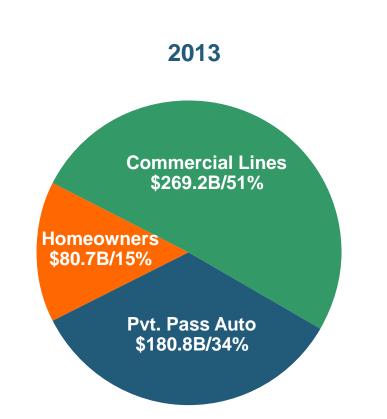


## Distribution of Direct Premiums Written by Segment/Line, 2013



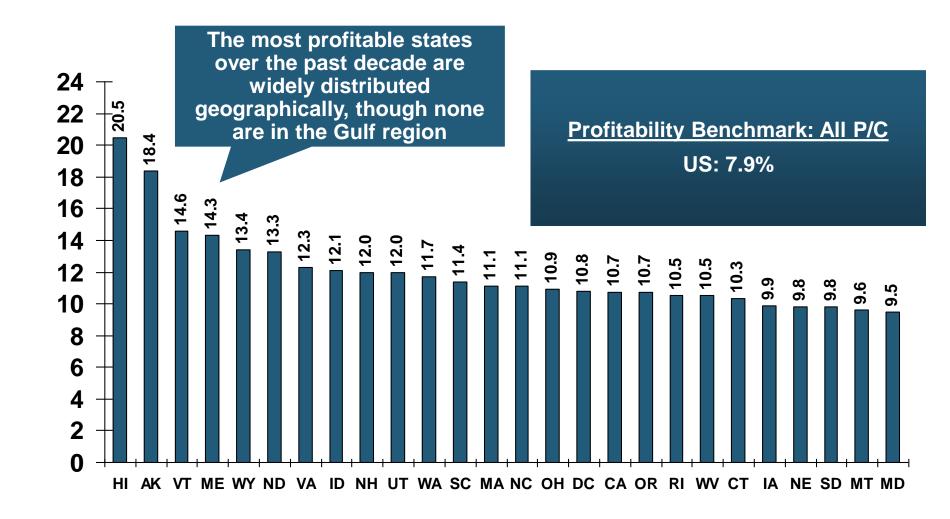
#### **Distribution Facts**

- Personal/Commercial lines split has been about 50/50 for many years
- 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

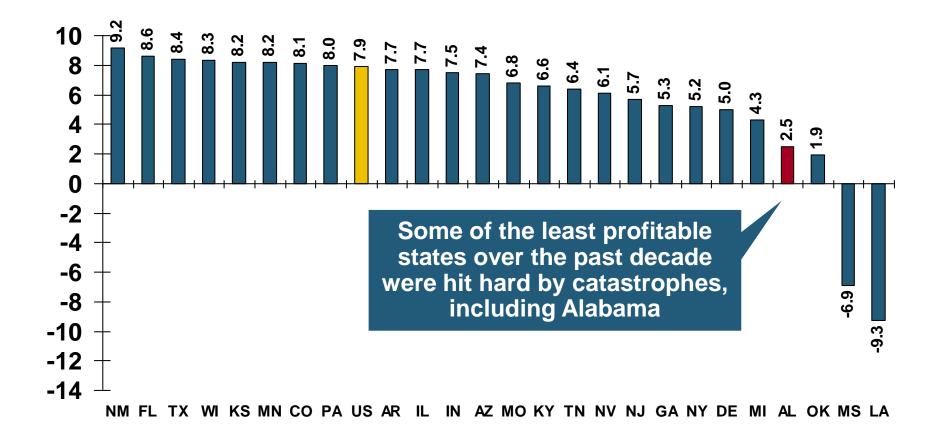


Sources: A.M. Best; Insurance Information Institute research.

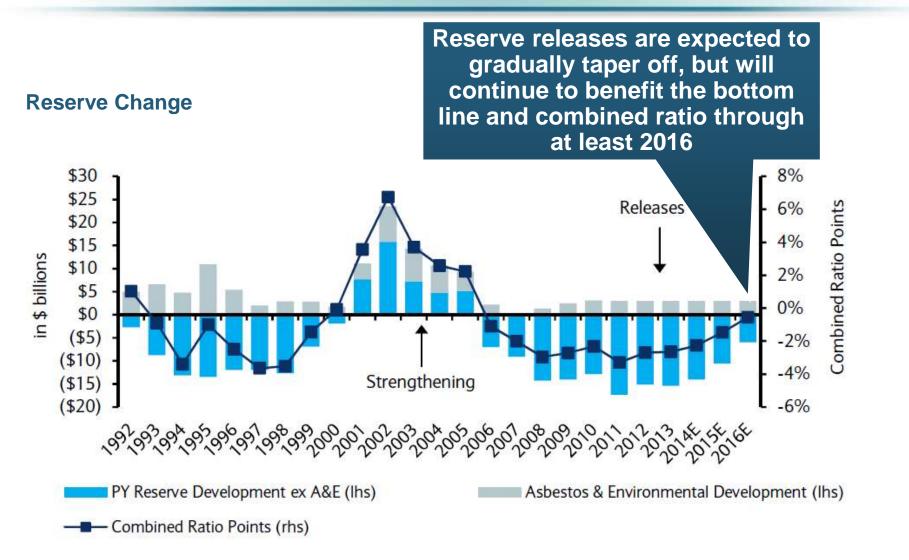
#### RNW All Lines by State, 2004-2013 Average: Highest 25 States



#### RNW All Lines by State, 2004-2013 Average: Lowest 25 States



### P/C Insurance Loss Reserve Development, INSURANCE 1992 – 2016E\*

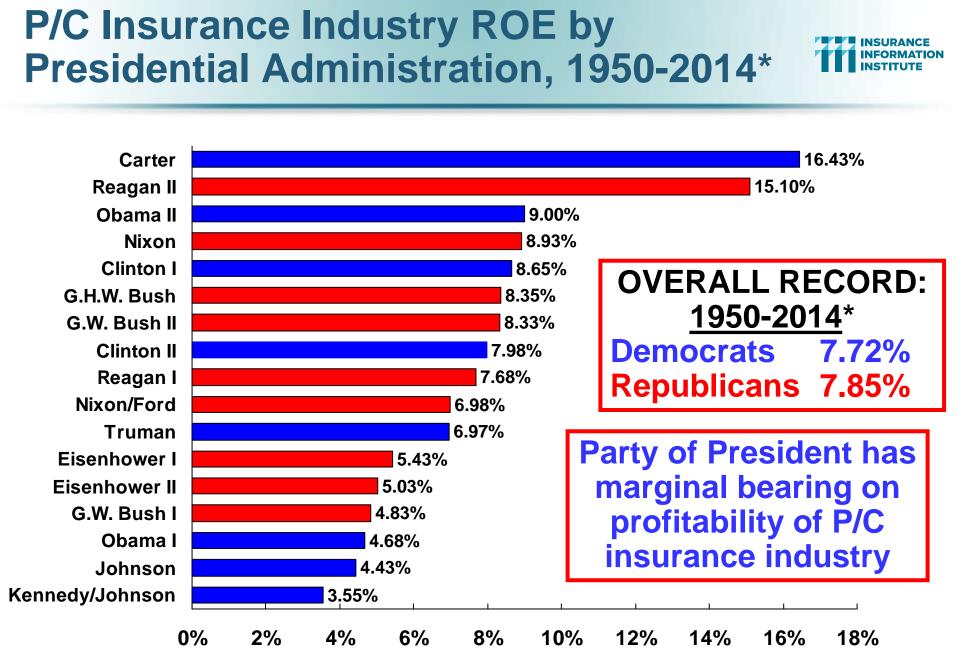


Source: A.M. Best; Barclays research for estimates.



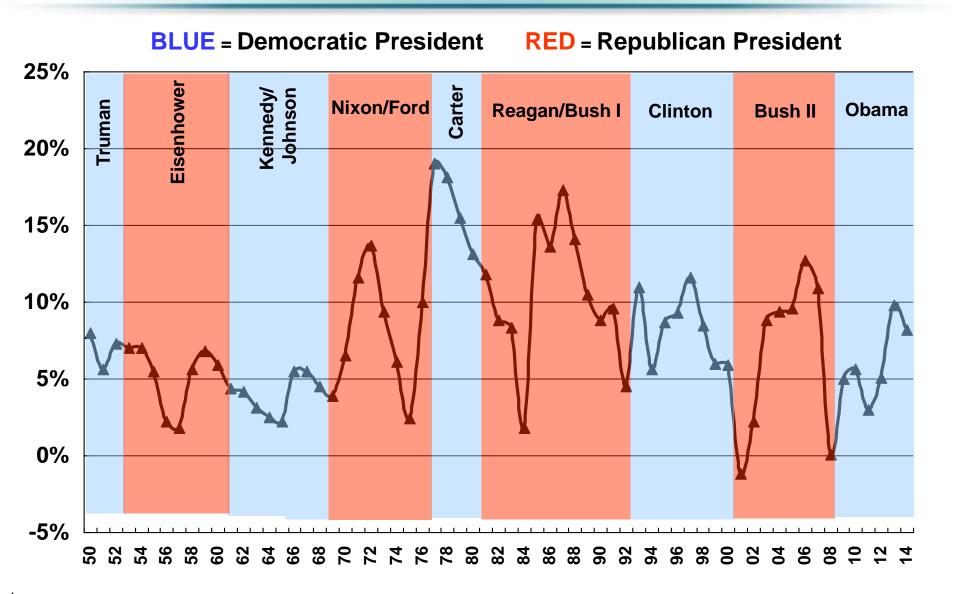
# **Profitability & Politics**

# How Is Profitability Affected by the President's Political Party?



\*Truman administration ROE of 6.97% based on 3 years only, 1950-52;. Source: Insurance Information Institute

### P/C insurance Industry ROE by Presidential Party Affiliation, 1950- 2014



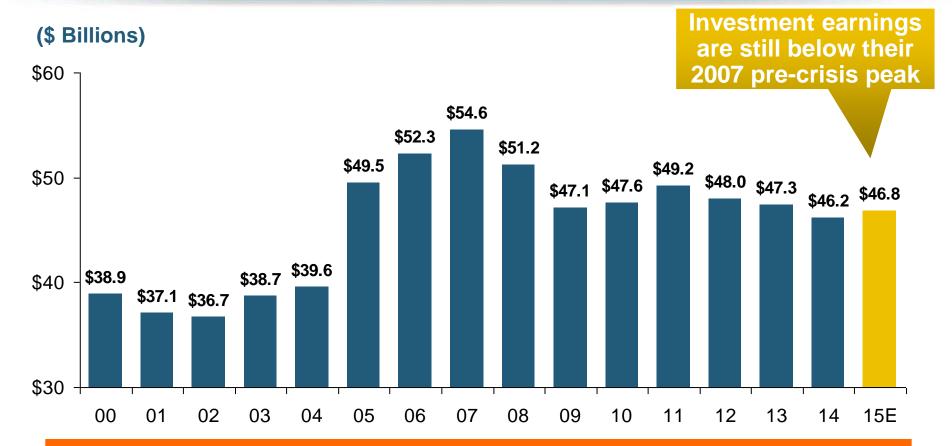


## 2. INVESTMENTS: THE NEW REALITY

Investment Performance is a Key Driver of Profitability

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

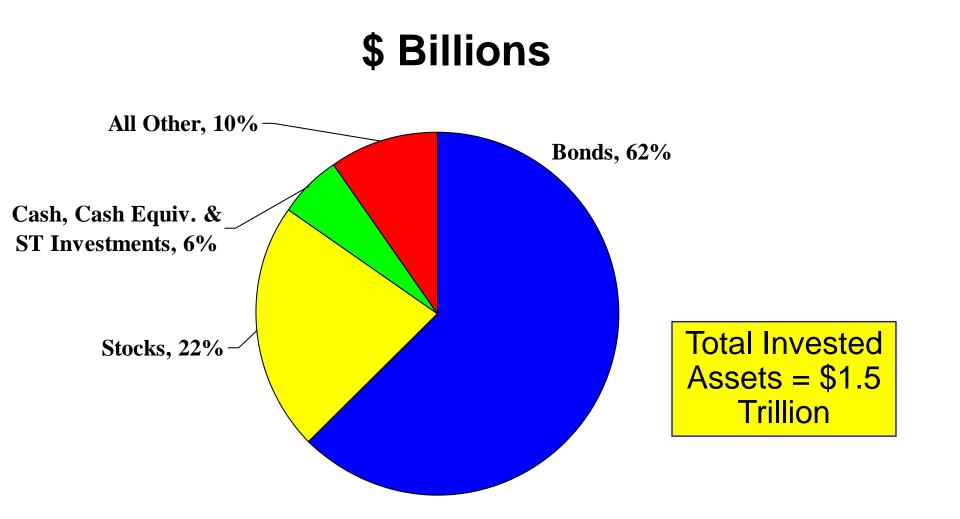
### Property/Casualty Insurance Industry Investment Income: 2000–2015E<sup>1</sup>



## Due to persistently low interest rates, investment income fell in 2012, 2013 and 2014.

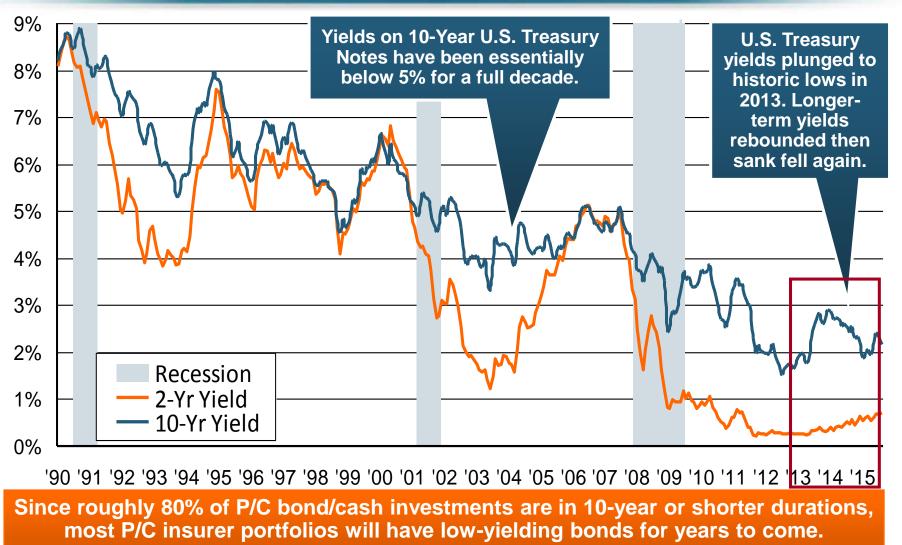
<sup>1</sup> Investment gains consist primarily of interest and stock dividends. Sources: ISO; Insurance Information Institute. \*2015 figure is estimated based on annualized data through Q2.

### Distribution of Invested Assets: P/C Insurance Industry, 2013



Source: Insurance Information Institute *Fact Book 2015,* A.M. Best.

### U.S. Treasury Security Yields: A Long Downward Trend, 1990–2015\*

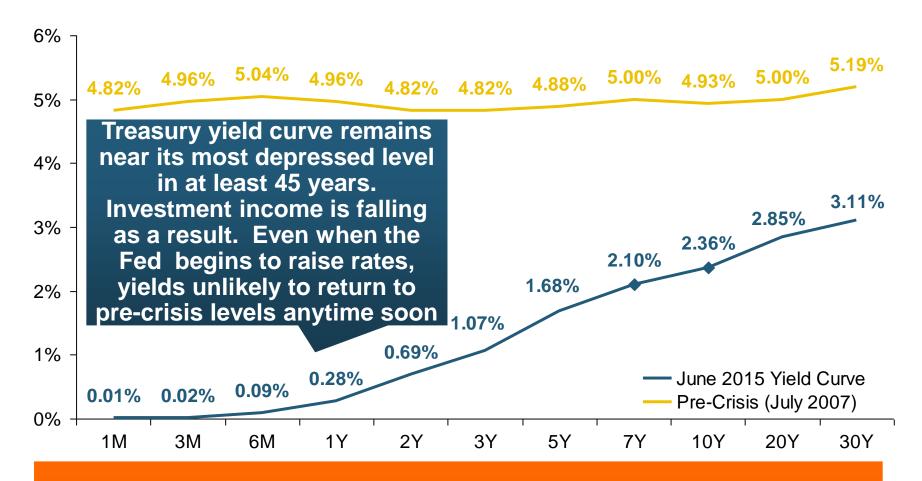


\*Monthly, constant maturity, nominal rates, through August 2015.

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

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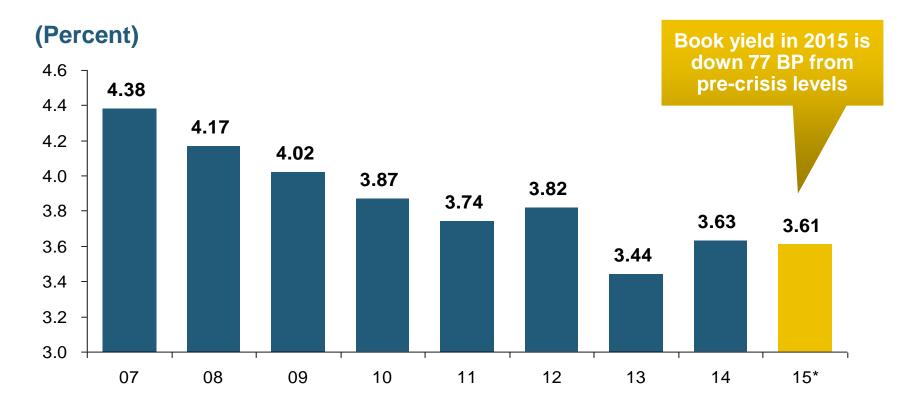
### Treasury Yield Curves: Pre-Crisis (July 2007) vs. June 2015



#### The Fed Is Actively is Signaling that it Is Likely to Begin Raising Rates Later in 2015 but Only Very Gradually

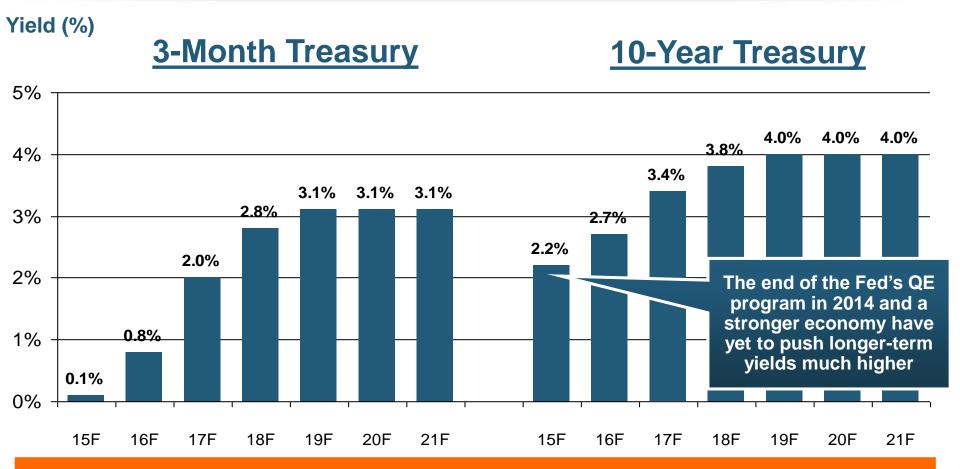
Source: Federal Reserve Board of Governors; Insurance Information Institute.

# Net Yield on Property/Casualty Insurance Invested Assets, 2007–2015\*



The yield on invested assets remains low relative to pre-crisis yields. The Fed's plan to raise interest rates in late 2015 has already pushed up some yields, albeit quite modestly.

#### Interest Rate Forecasts: 2015 – 2021

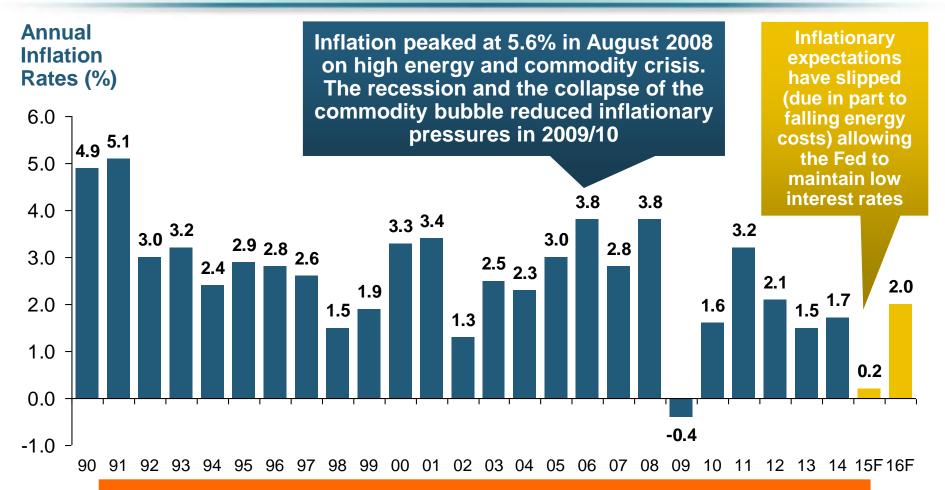


# A full normalization of interest rates is unlikely until the 2020s, more than a decade after the onset of the financial crisis.

Sources: Blue Chip Economic Indicators (10/15 for 2015 and 2016; for 2017-2021 10/15 issue); Insurance Info. Institute.

### Annual Inflation Rates, (CPI-U, %), 1990–2016F

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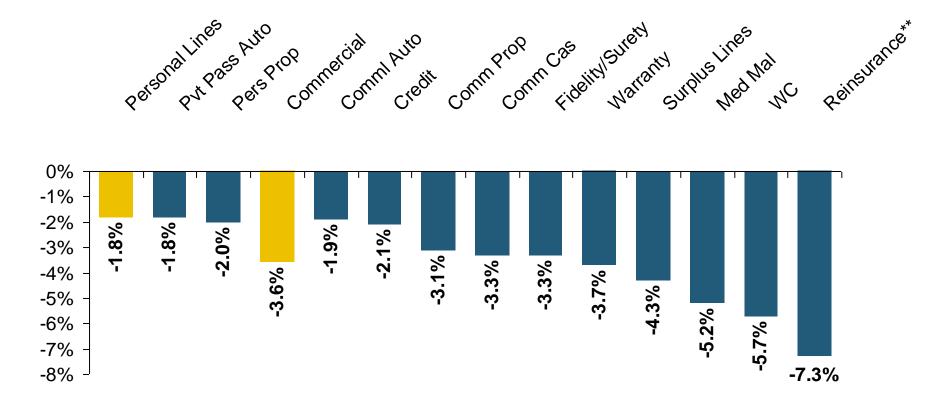


#### Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators, 9/15 (forecasts).

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





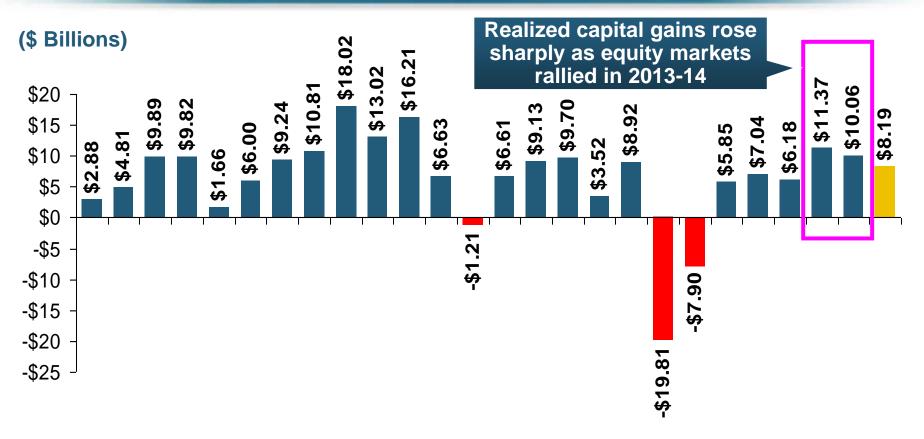
#### Lower Investment Earnings Place a Greater Burden on Underwriting and Pricing Discipline

\*Based on 2008 Invested Assets and Earned Premiums

\*\*US domestic reinsurance only

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

### P/C Insurer Net Realized Capital Gains/Losses, 1990-2015:Q2



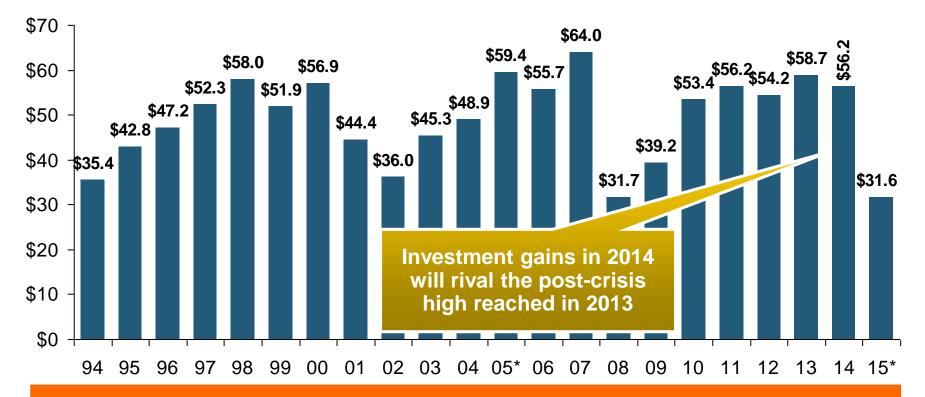
90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15\*

Insurers Posted Net Realized Capital Gains in 2010 - 2014 Following Two Years of Realized Losses During the Financial Crisis. Realized Capital Losses Were a Primary Cause of 2008/2009's Large Drop in Profits and ROE.

\*Through Q2 2015. Sources: A.M. Best, ISO, SNL, Insurance Information Institute.

### Property/Casualty Insurance Industry Investment Gain: 1994–2015:Q2<sup>1</sup>

(\$ Billions)



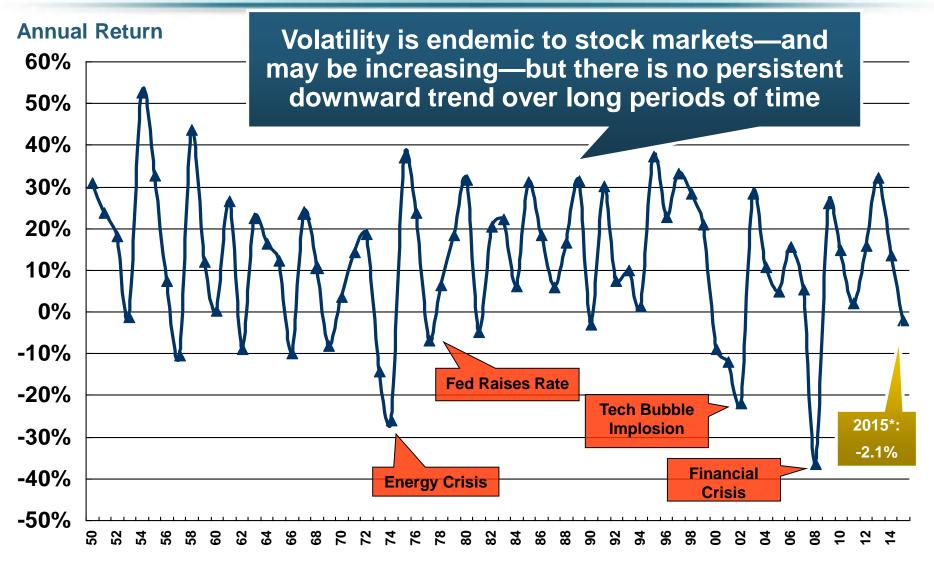
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Total Investment Gains Were Down Slightly in 2014 as Low Interest Rates Pressured Investment Income but Realized Capital Gains Remained Robust

<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; 2015 figure is through Q2 2015.
 Sources: ISO, SNL; Insurance Information Institute.

### S&P 500 Index Returns, 1950 – 2015\*



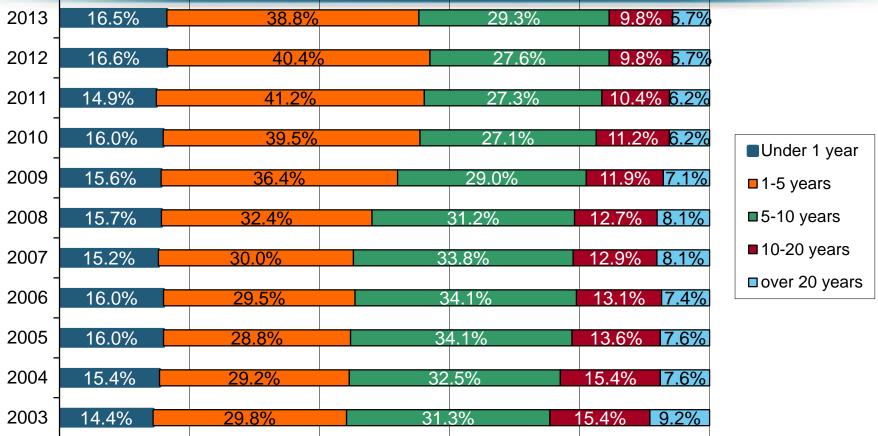


\*Through Oct. 9, 2015.

Source: NYU Stern School of Business: http://pages.stern.nyu.edu/~adamodar/New\_Home\_Page/datafile/histretSP.html Ins. Info. Inst.

## Distribution of Bond Maturities, P/C Insurance Industry, 2003-2013





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.

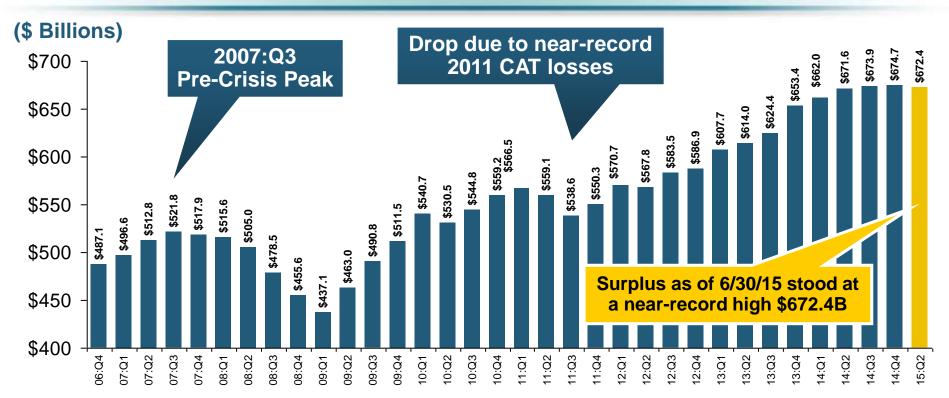


## 3. CAPITAL/CAPACITY

# Capital Accumulation Has Multiple Impacts Alternative Capital Impacts?

# Policyholder Surplus, 2006:Q4–2015:Q2





# The industry now has \$1 of surplus for every \$0.73 of NPW, close to the strongest claims-paying status in its history.

2010:Q1 data includes \$22.5B of paid-in capital from a holding company parent for one insurer's investment in a non-insurance business.

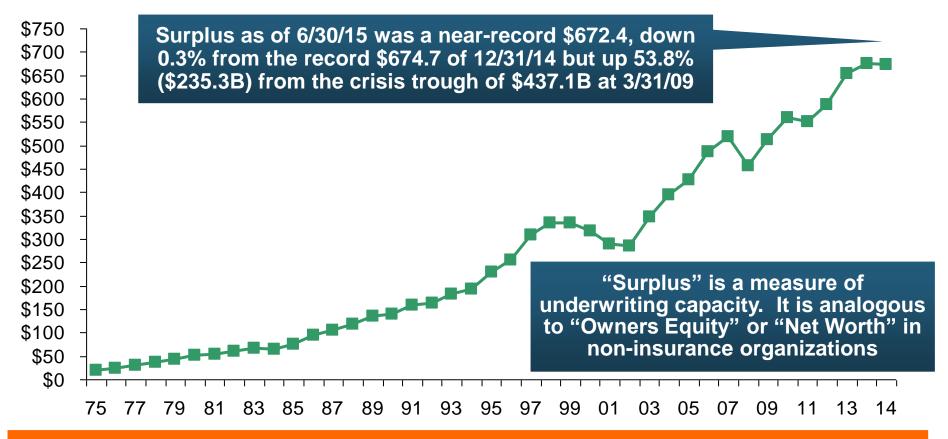
The P/C insurance industry entered 2015 in very strong financial condition.

Sources: ISO, A.M .Best.

# US Policyholder Surplus: 1975–2015:Q2\*



#### (\$ Billions)



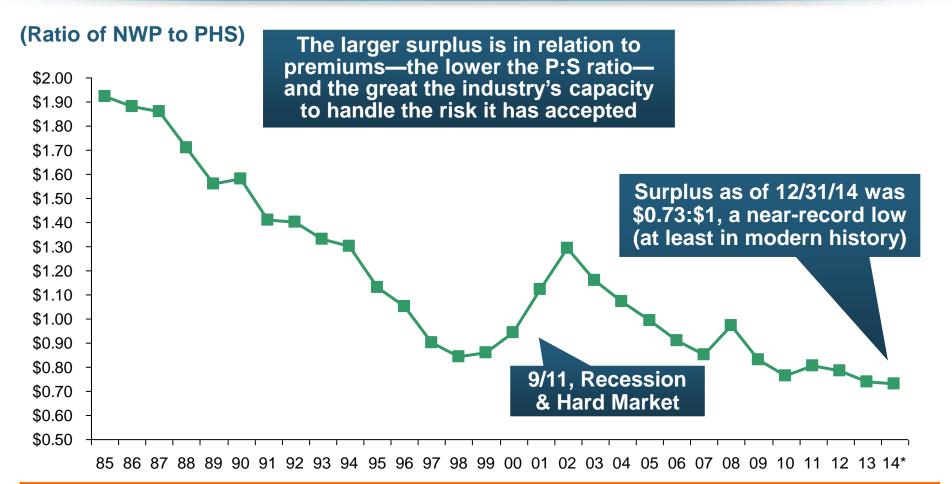
## The Premium-to-Surplus Ratio Stood at \$0.76:\$1 as of 6/30/15, a Near Record Low (at Least in Recent History)

\*As of 6/30/15.

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

# Premium-to-Surplus Ratio: 1985–2014\*



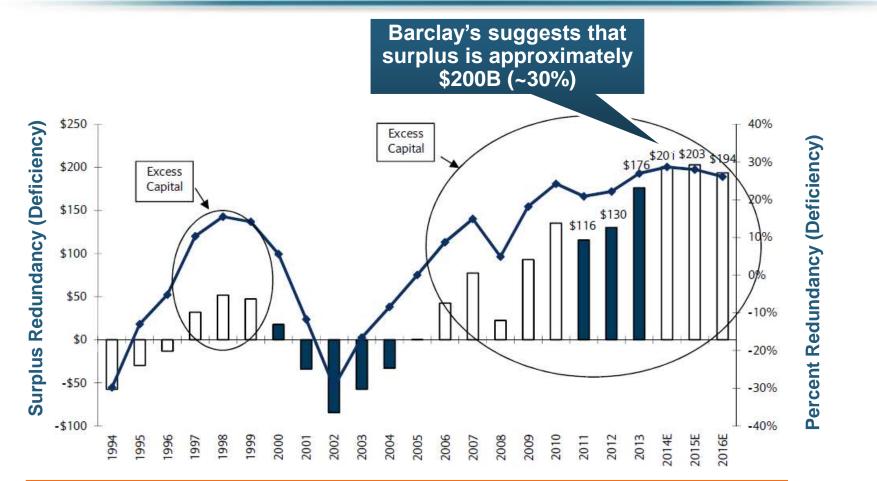


## The Premium-to-Surplus Ratio Stood at \$0.73:\$1 as of 12/31/14, a Record Low (at Least in Recent History)

\* As of 12/31/14.

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

### US P/C Insurance Industry Excess Capital Position: 1994–2016E

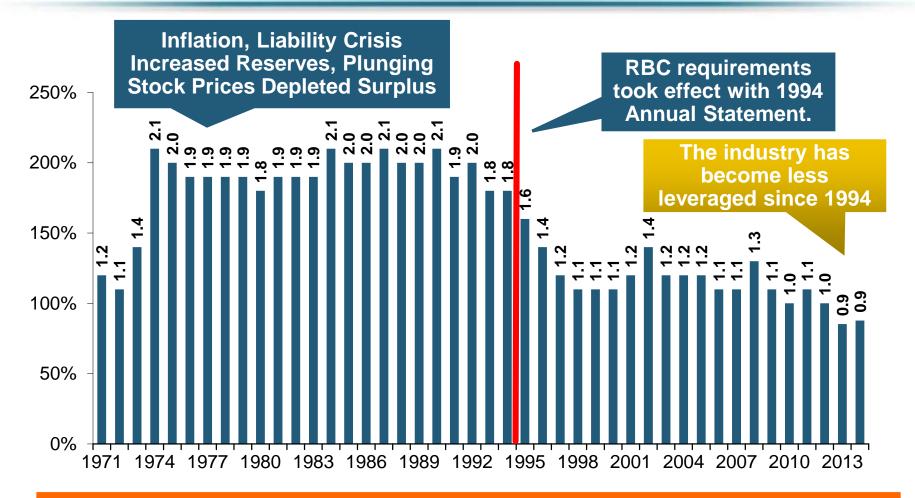


The Industry's Strong Capital Position Suggests Insurers Are in a Good Position to Increase Risk Appetite, Repurchase Shares and Pursue Acquisitions

Source: Barclays Research estimates.

### P/C Industry: Loss Reserve-to-Surplus Ratio, 1971-2014

#### INSURANCE INFORMATION INSTITUTE



#### The Property/Casualty Industry Adjusted Its Risk Portfolio in Response to Risk-Based Capital Requirements Implemented in 1994.

Source: Calculations from A.M. Best and ISO data by Insurance Information Institute.



## **Alternative Capital**

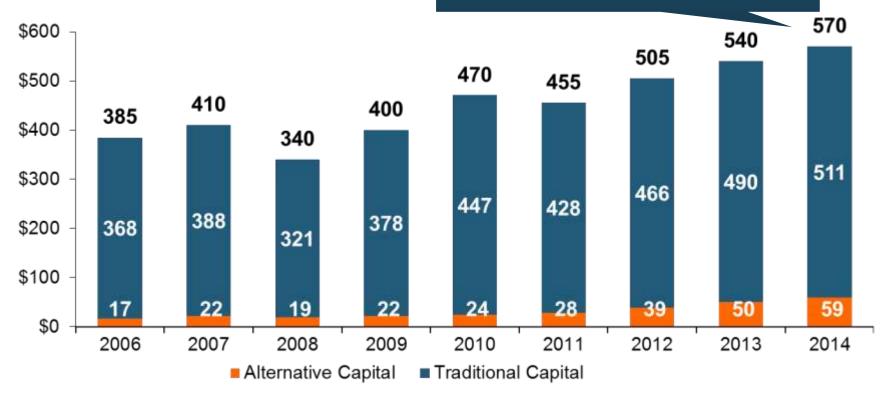
## New Investors Continue to Change the Reinsurance Landscape

First I.I.I. White Paper on Issue Was Released in March 2015

# Global Reinsurance Capital (Traditional and Alternative), 2006 - 2014



Total reinsurance capital reached a record \$570B in 2013, up 68% from 2008.



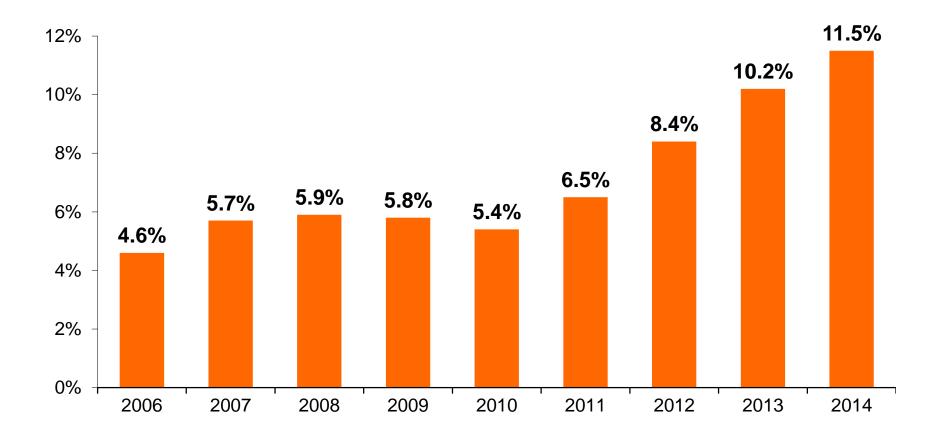
## But alternative capacity has grown 210% since 2008, to \$50B. It has more than doubled in the past three years.

2014 data is as of June 30, 2014.

(Billions of USD)

Source: Aon Benfield Analytics; Insurance Information Institute.

## Alternative Capital as a Percentage of Traditional Global Reinsurance Capital

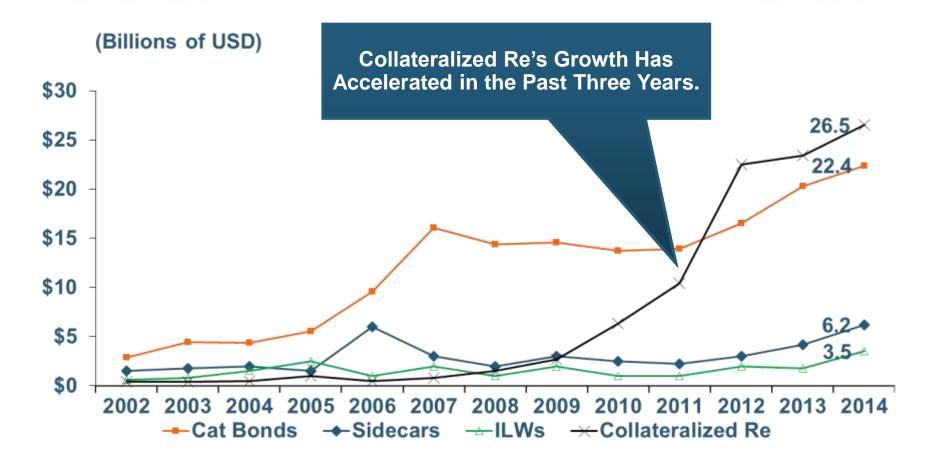


#### Alternative Capital's Share of Global Reinsurance Capital Has More Than Doubled Since 2010.

2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.

# **Growth of Alternative Capital Structures**, 2002 - 2014



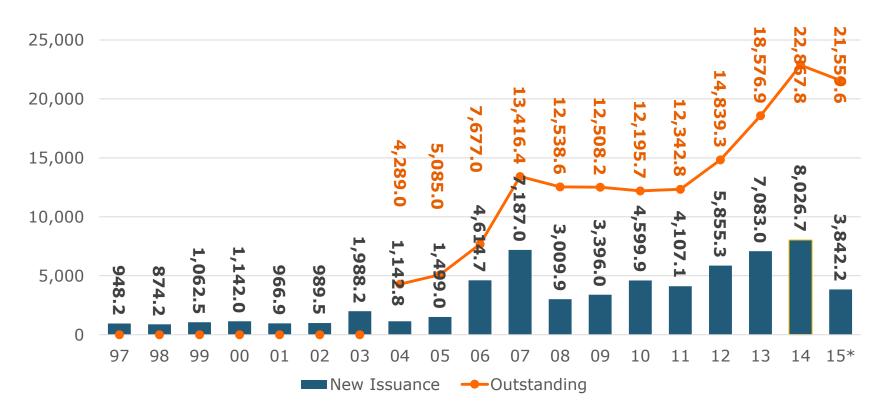
## Collateralized Reinsurance and Catastrophe Bonds Currently Dominate the Alternative Capital Market.

2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.

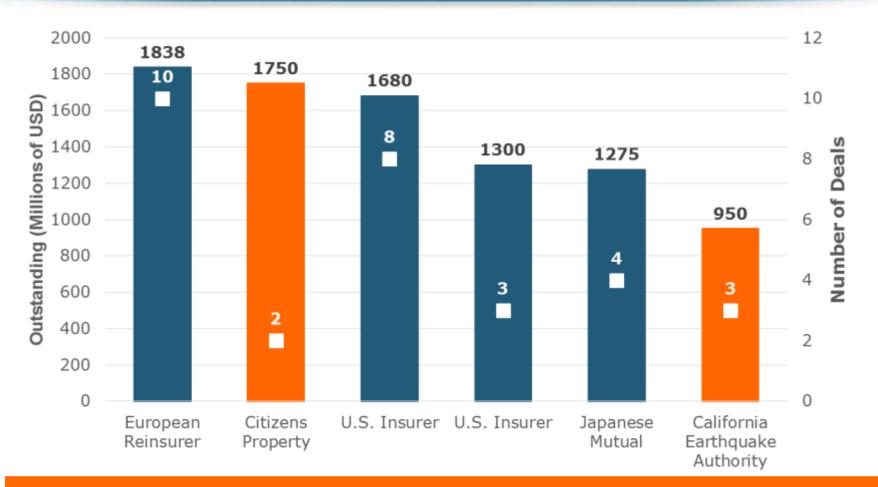
## Catastrophe Bond Issuance and Outstanding: 1997-2015:Q2





Cat Bond Issuance Appears to Be Slowing Down in 2015 from 2014's Record Pace. Lower Yields on Bonds Explain Some of the Contraction.

## Largest Sponsors of ILS, Year-End 2014



## Two of the Largest ILS Issuers Are Government-Sponsored Insurers. Nine Government-Related Insurers Have \$4.6 Billion in Outstanding Securities.

Source: Artemis.bm; Insurance Information Institute.

## Reinsurance Pricing: Change in Rate on Line for Cat Business

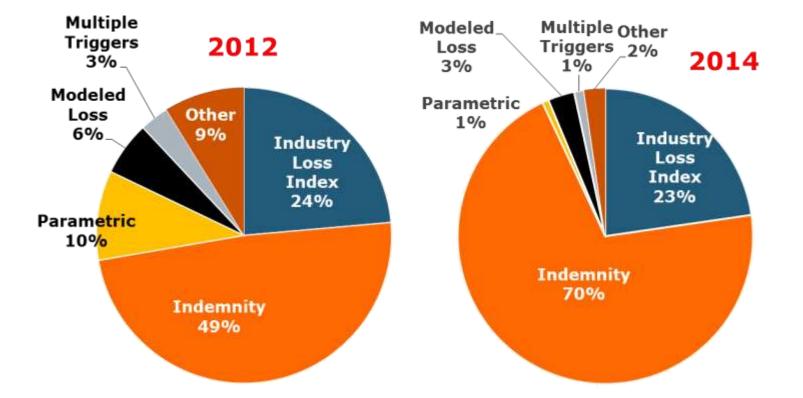


#### Catastrophe Prices Fell 11 Percent on January 1 Renewals, Driven by Emergence of New Capital, Mild Catastrophe Losses.

2014 reflects change through June 30 from prior year end. 2015 is for January 1 renewals.. Source: Guy Carpenter; Insurance Information Institute.

## **ILS Issuance by Trigger**





Terms Are Shifting Away From 'Objective' Triggers (Favored by Investors) Toward Indemnity Trigger (Favored by Insurers).

Source: Artemis.bm; Insurance Information Institute.

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



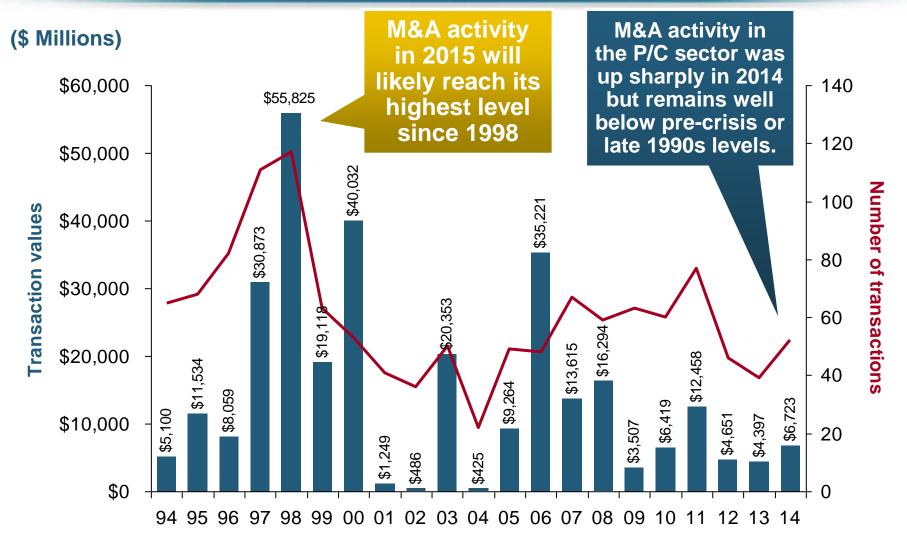
- What Will Happen When Investors Face Large-Scale Losses?
- What Happens When Interest Rates Rise?
- Does ILS Have a Higher Propensity to Litigate?
- How Much Lower Will Risk Premiums Shrink/ROLs Fall?
- Will There Be Spillover Into Casualty Reinsurance?
- Will Alternative Capital Drive Consolidation?



## 4. M&A UPDATE: A PATH TO GROWTH?

## Are Capital Accumulation, Drive for Growth and Scale Stimulating M&A Activity?

## U.S. INSURANCE MERGERS AND ACQUISITIONS, P/C SECTOR, 1994-2014 (1)



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

Source: Conning proprietary database.

## Top Global P&C M&As in 2014 - YTD 2015

Acquirer	Target	Transaction Value
ACE (Switzerland)	Chubb (US)	\$28,300
Exor (Italy)	PartnerRe Ltd. (Bermuda)	\$6,900
Zurich (Switzerland)	RSA (UK)	8,000
XL Group plc (Ireland)	Catlin Group Ltd. (Bermuda)	4,200
RenaissanceRe Holdings Ltd. (Bermuda)	Platinum Underwriters Holdings Ltd. (Bermuda)	1,900
Fairfax Financial Holdings Ltd.		
(Canada)	Brit Insurance Holdings NV (Netherlands)	1,880
	State Farm's property/casualty and life insurance	
Desjardins Financial Corp. (Canada)	operations in Canada (Canada)	1,500
TPG Capital LP	The Warranty Group, Inc. (Canada)	1,500
Fosun International Ltd. (China)	Caixa Seguros e Saude SGPA SA (Portugal)	1,360
Progressive Corp.	ARX Holding Corp.	875
Assured Guaranty Ltd. (Bermuda)	Radian Asset Assurance, Inc.	810
	German and Italina operations of Direct Line	
Mapfre S.A. (Spain)	Insurance Group plc (Germany/Italy)	701
Validus Holdings Ltd. (Bermuda)	Western World Insurance Group, Inc.	690
ACE Ltd. (Switzerland)	P&C business from Itau Seguros S.A. (Brazil)	685 (TransDa)

Update: Alleghany Corp. announced in May 2015 that it is considering the sale of TransAtlantic Holding Co. (TransRe). \*Source: Conning; Insurance information Institute.

## Recent M&A Transactions Involving Lloyd's and Bermuda Re/Insurers

Date	Acquirer	Target	Deal Value \$ Billion
Dec 2012	Aquiline	Equity Redstar	0.1
Jun 2013	Enstar/Stone Point	Atrium	0.2
Jul 2013	Enstar/Stone Point	Torus	0.7
Aug 2013	Ian Beaton and Management	Ark Syndicate Management	0.4
Aug 2013	Lancashire	Cathedral	0.4
Aug 2013	AmTrust	Sagicor	0.1
Sep 2013	ANV	Jubilee Managing Agency	N/A
Dec 2013	Sompo	Canopius	1.0
Feb 2014	Qatar Insurance Company	Antares	0.2
Jul 2014	BTG Pactual	Ariel Re	0.4
Nov 2014	RenaissanceRe	Platinum Underwriters	1.9
Dec 2014	XL Group	Catlin	4.1
Jan 2015	PartnerRe	AXIS	11.0*
Feb 2015	Fairfax Financial Holdings	Brit	1.9

\*Deal was not complete as of 6/4/15 and a rival bid from Italian investment firm Exor was still under consideration. Source: Swiss Re *sigma* 3/2015; Insurance information Institute.

## What's Driving Global Insurance M&A Activity and Will It Continue?



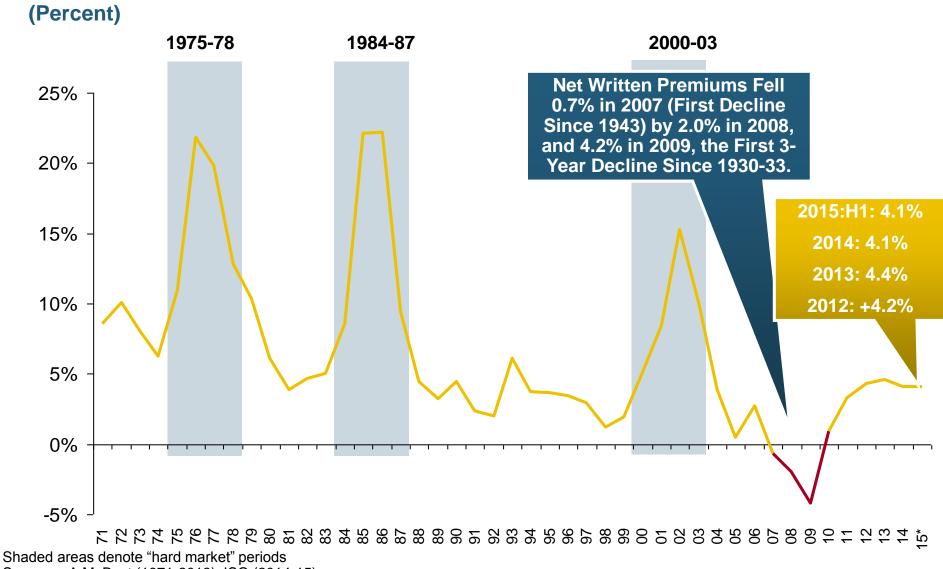
- Excess Capital in Global Reinsurance and Primary Commercial Insurance in US
  - (Re)Insurers, like corporations in many industry, are sitting are large amounts of cash accumulated since the Global Financial Crisis that earns very little
- Alternative Capital
- Slow Top Line (Premium) Growth
- Slowdown in Pace of Earnings Growth/ROE
- Low Interest Rates Make Debt Financing for Acquisitions Attractive
  - Concern that interest rates in US may soon rise so best to act now
- Desire to Achieve Economies of Scale
- Peer Pressure/Momentum
  - Management concerns about being "left out"



## 5. Growth

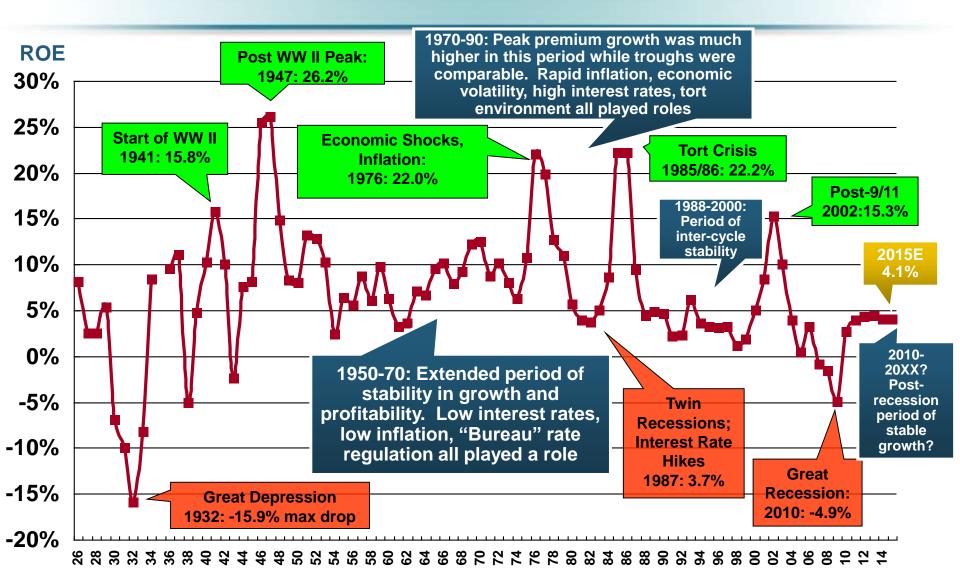
## Premium Growth Rates Vary Tremendously by State and Over Time, But...

## Net Premium Growth (All P/C Lines): Annual Change, 1971—2015:H1



Sources: A.M. Best (1971-2013), ISO (2014-15).

### NPW Premium Growth: Peaks & Troughs in the P/C Insurance Industry, 1926 – 2015E

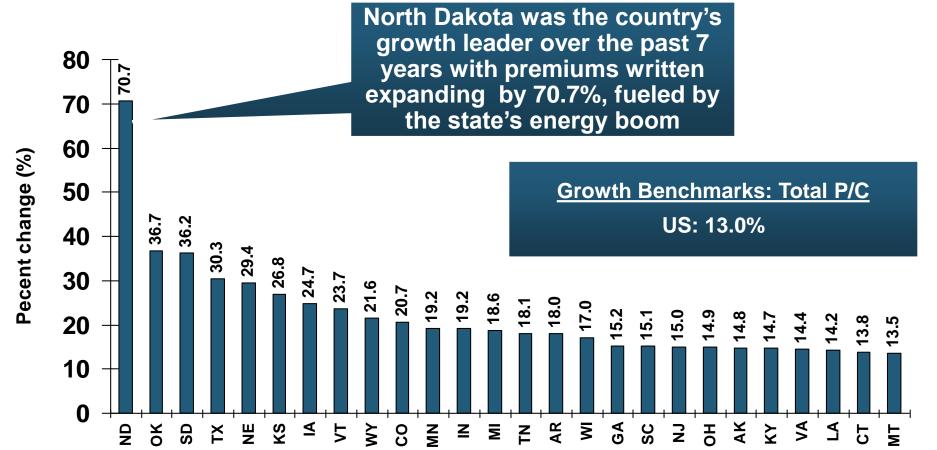


Note: Data through 1934 are based on stock companies only. Data include state funds beginning in 1998. Source: A.M. Best; Insurance Information Institute.

## Direct Premiums Written: Total P/C Percent Change by State, 2007-2014



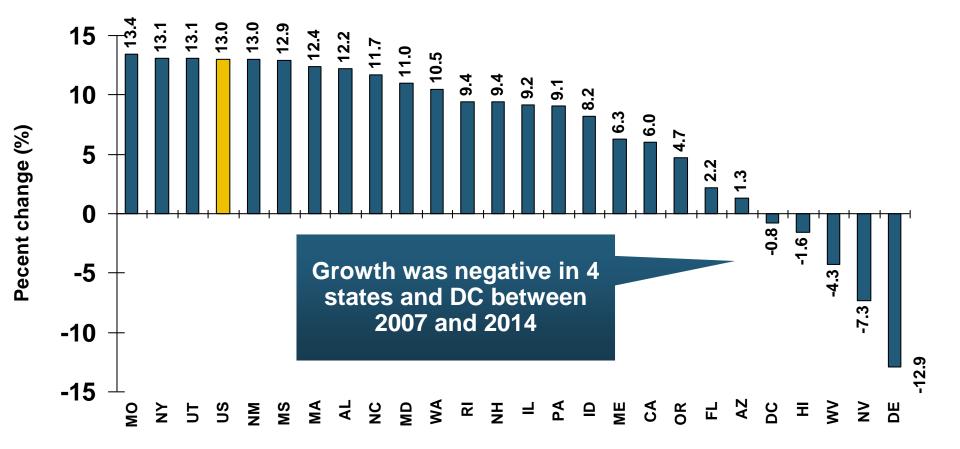




## Direct Premiums Written: Total P/C Percent Change by State, 2007-2014



### **Bottom 25 States**

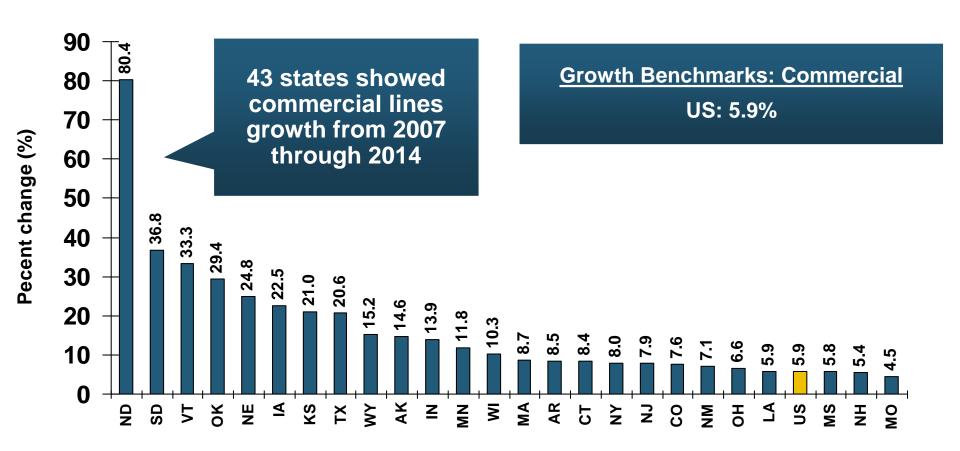


Sources: SNL Financial LC.; Insurance Information Institute.

## Direct Premiums Written: Comm. Lines Percent Change by State, 2007-2014



**Top 25 States** 

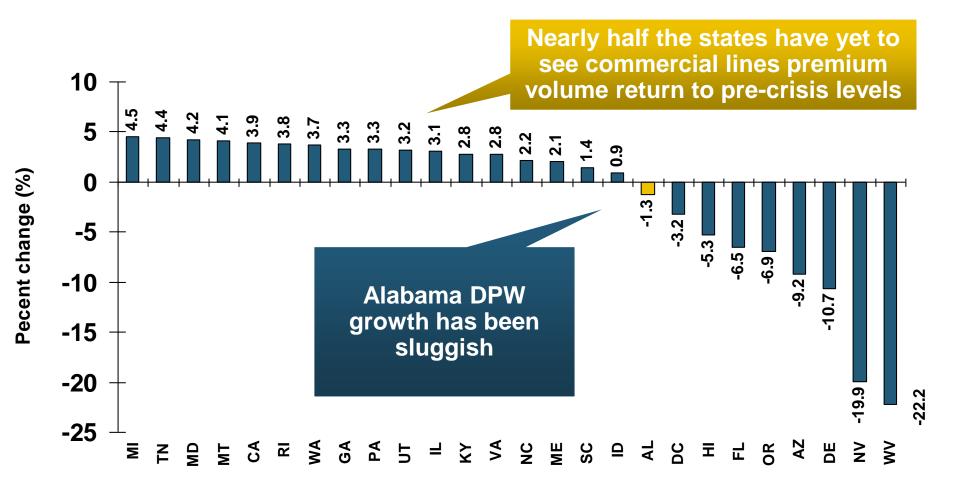


Sources: SNL Financial LLC.; Insurance Information Institute.

## Direct Premiums Written: Comm. Lines Percent Change by State, 2007-2014



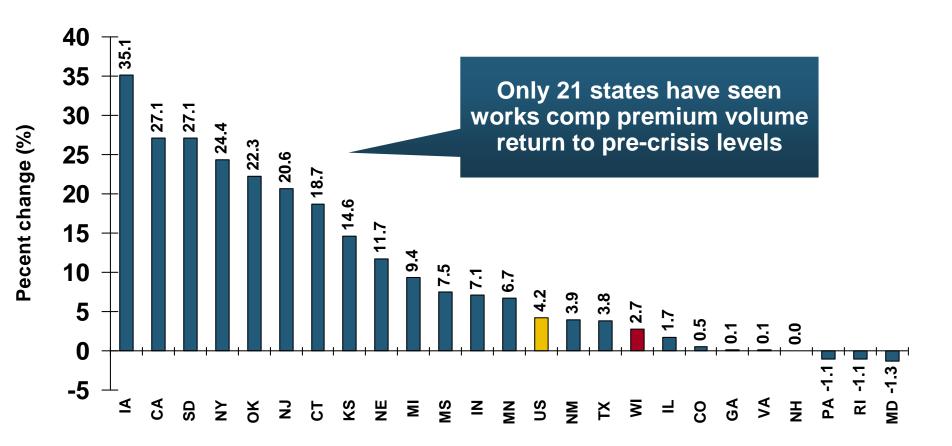
### **Bottom 25 States**



Sources: SNL Financial LLC.; Insurance Information Institute.

## Direct Premiums Written: Workers' Comp

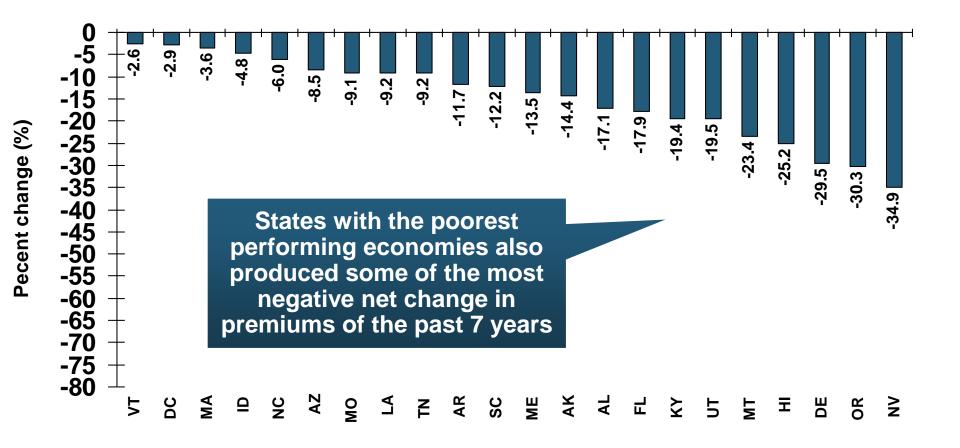
**Top 25 States** 



\*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.

## Direct Premiums Written: Worker's Comp

### **Bottom 25 States**



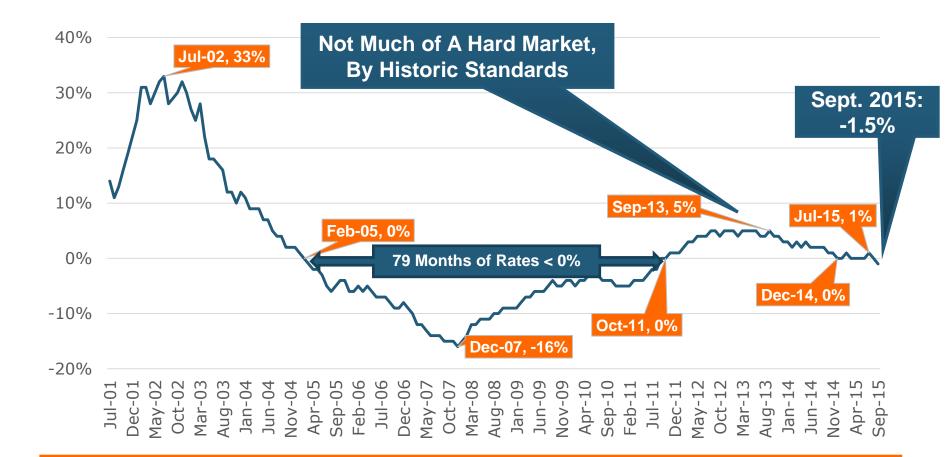
\*Excludes monopolistic fund states: ND, OH, WA, WY as well as WV, which transitioned to a competitive structure during this period. Sources: SNL Financial LC.; Insurance Information Institute.



## 6. Pricing Trends

## Survey Results Suggest Commercial Pricing Has Flattened Out but Personal Lines Are Up

## Commercial Lines Rate Change by Month (vs. Year Earlier), July 2001 – Sep. 2015



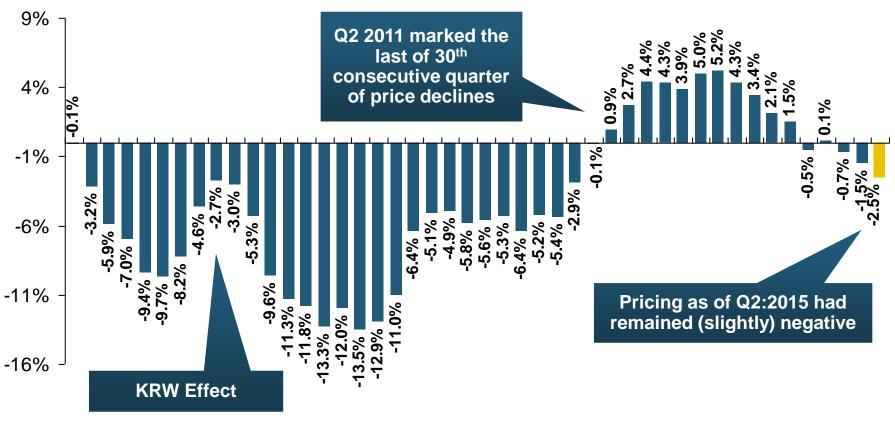
#### **Commercial Insurance Rate Changes Are Fairly Stable**

SOURCE: MarketScout, Insurance Information Institute.

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## CIAB: Average Commercial Rate Change, All Lines, (1Q:2004–2Q:2015)

(Percent)

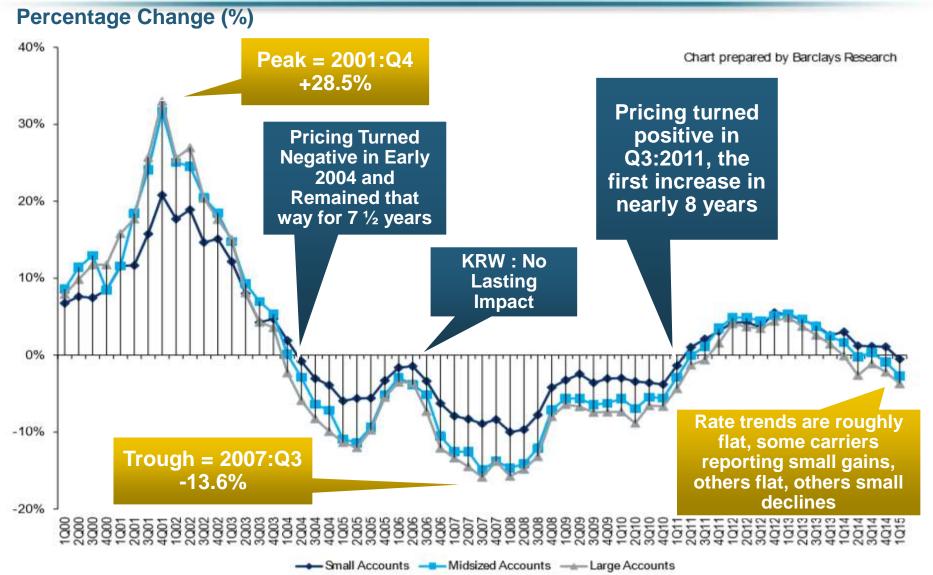


#### 

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

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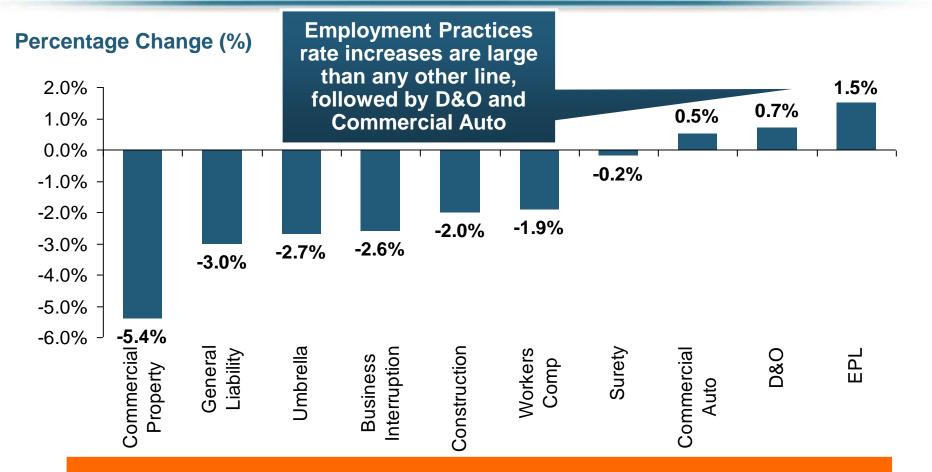
## Change in Commercial Rate Renewals, by Account Size: 1999:Q4 to 2015:Q1



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

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# Change in Commercial Rate Renewals, by Line: 2015:Q2



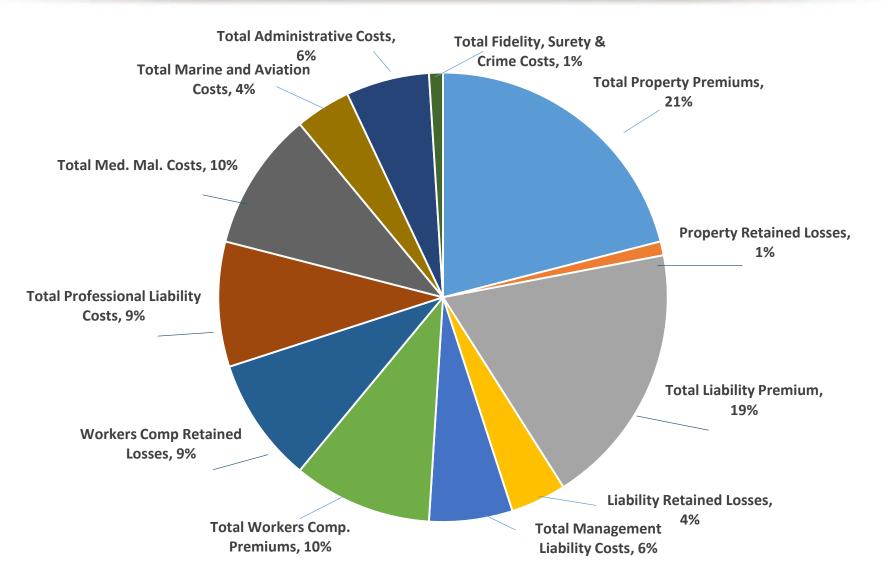
Major Commercial Lines Renewals Were Mixed to Flat in Q2:2015; EPL, D&O and Commercial Auto Led the Way

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.

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### How the Risk Dollar is Spent (U.S. Firms with Revenues Under \$1 Bill)

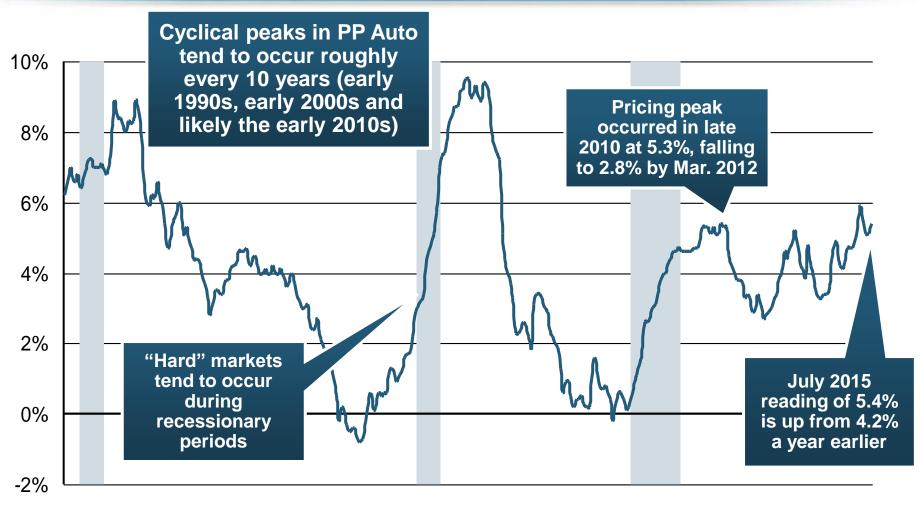




Source: 2015 RIMS Benchmark Survey; Insurance Information Institute.

## Monthly Change in Auto Insurance Prices, 1991–2015\*





'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 '15

\*Percentage change from same month in prior year; through July 2015; seasonally adjusted

Note: Recessions indicated by gray shaded columns.

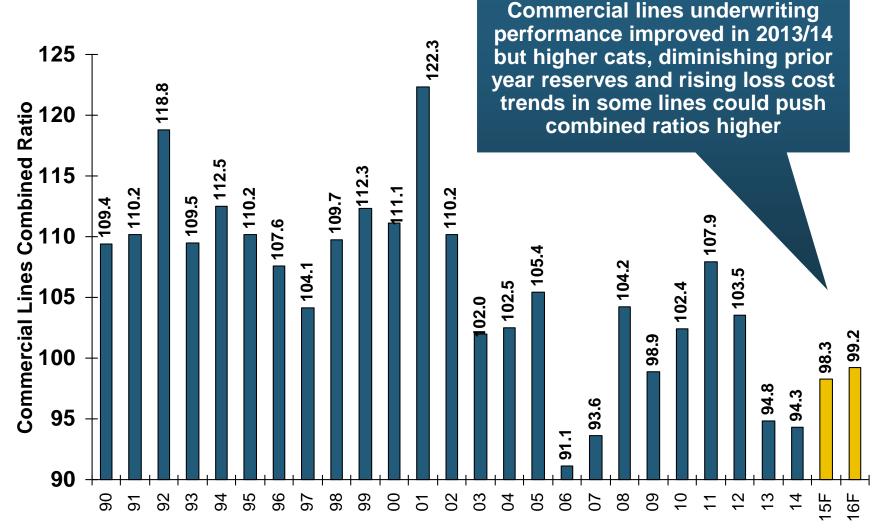
Sources: US Bureau of Labor Statistics; National Bureau of Economic Research (recession dates); Insurance Information Institutes.



## 7. Underwriting Performance

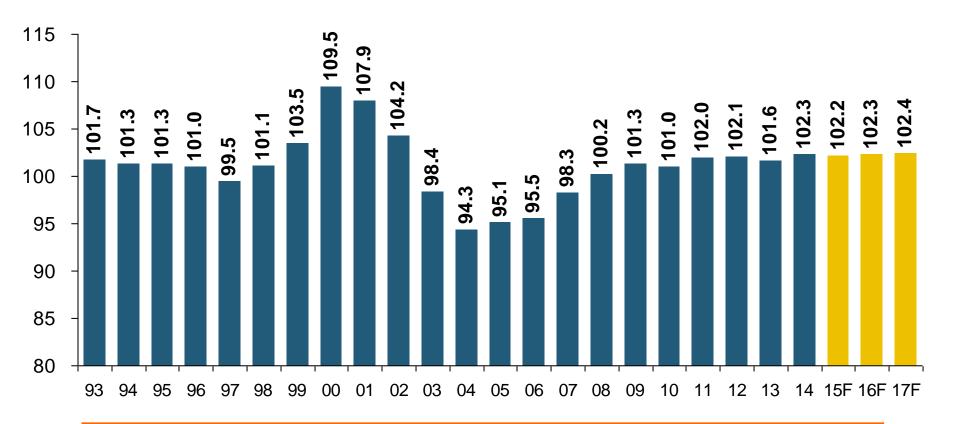
# Commercial Lines Combined Ratio, 1990-2016F\*

#### INSURANCE INFORMATION INSTITUTE



\*2007-2012 figures exclude mortgage and financial guaranty segments. Source: A.M. Best (1990-2014); Conning (2015-16F) Insurance Information Institute.

## Private Passenger Auto Combined Ratio: 1993–2017F

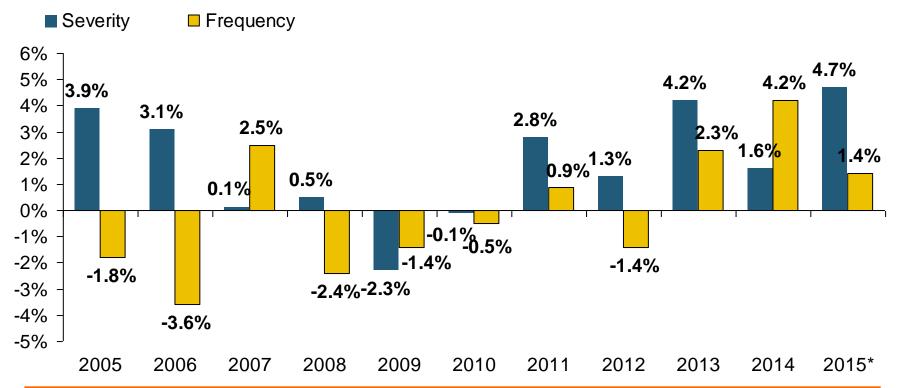


#### Private Passenger Auto Underwriitng Performance Is Exhibiting Remarkable Stability

Sources: A.M. Best (1990-2014); Conning (2015F – 2017F); Insurance Information Institute.

## Collision Coverage: Severity & Frequency Trends Are Both Higher in 2015\*

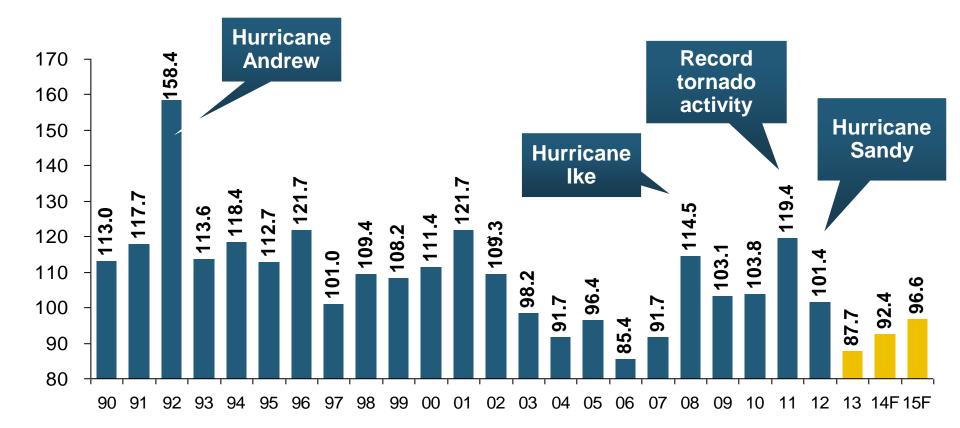
#### Annual Change, 2005 through 2015\*



#### The Recession, High Fuel Prices Helped Temper Frequency and Severity, But this Trend Will Likely Be Reversed Based on Evidence from Past Recoveries

\*2015 figure is for the 4 quarters ending with 2015:Q2. Source: ISO/PCI *Fast Track* data; Insurance Information Institute

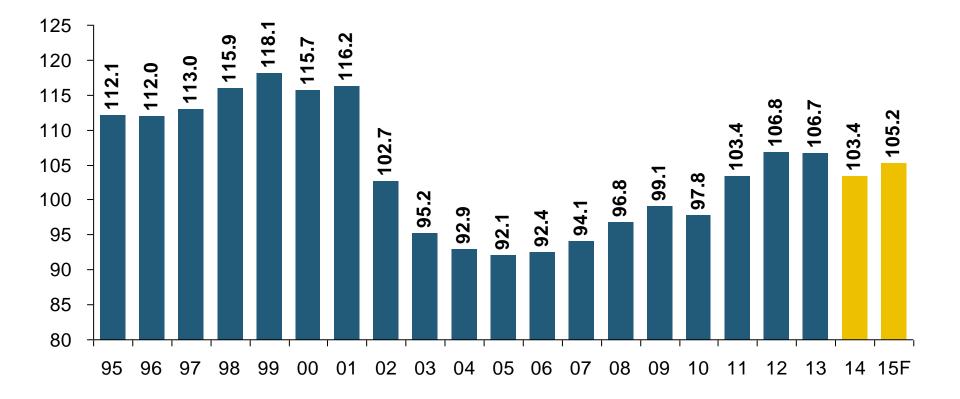
## Homeowners Insurance Combined Ratio: 1990–2015F



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 (1990-2014F); Conning (2015F); Insurance Information Institute.

# Commercial Auto Combined Ratio: 1993–2015F

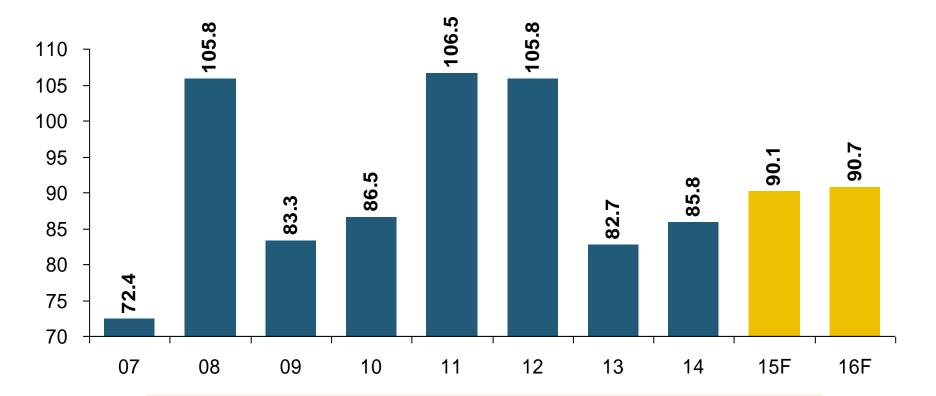


#### Commercial Auto is Expected to Improve Only Slowly as Rate Gains Barely Offset Adverse Frequency and Severity Trends

Sources: A.M. Best (1990-2014); Conning (2015F); Insurance Information Institute.

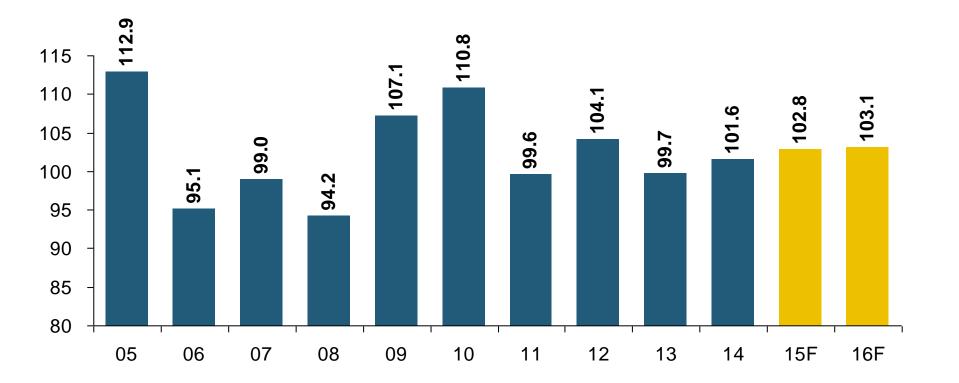
### **Commercial Property Combined Ratio:** 2007–2016F





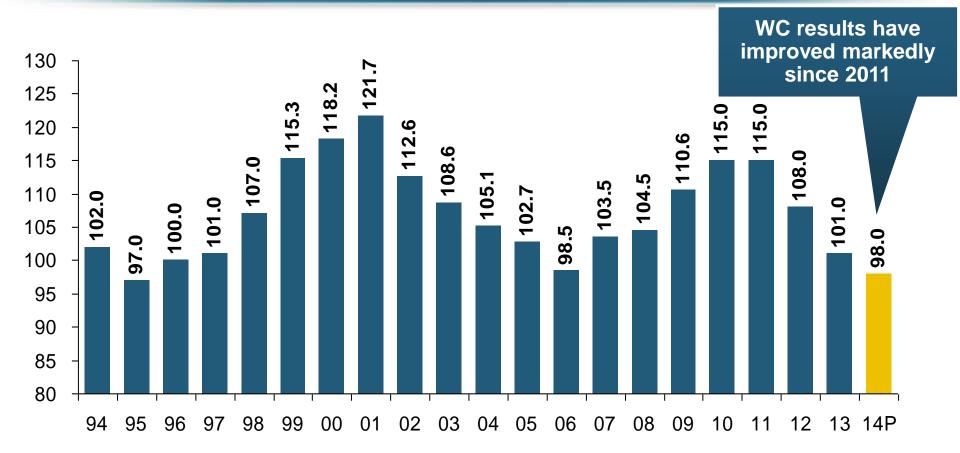
Commercial Property Underwriting Performance Has Been Volatile in Recent Years, Largely Due to Fluctuations in CAT Activity

## General Liability Combined Ratio: 2005–2016F



Commercial General Liability Underwriting Performance Has Been Volatile in Recent Years

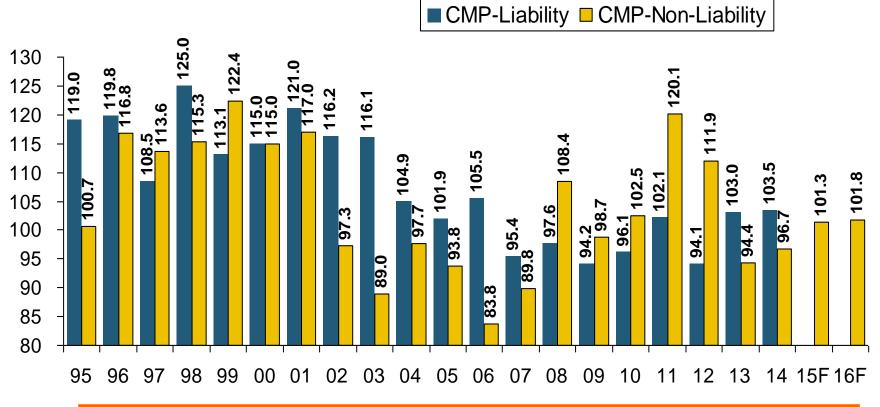
### Workers Compensation Combined Ratio: 1994–2014P



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 (2010-2014P) and are for private carriers only; Insurance Information Institute.

# Commercial Multi-Peril Combined Ratio: 1995–2016F

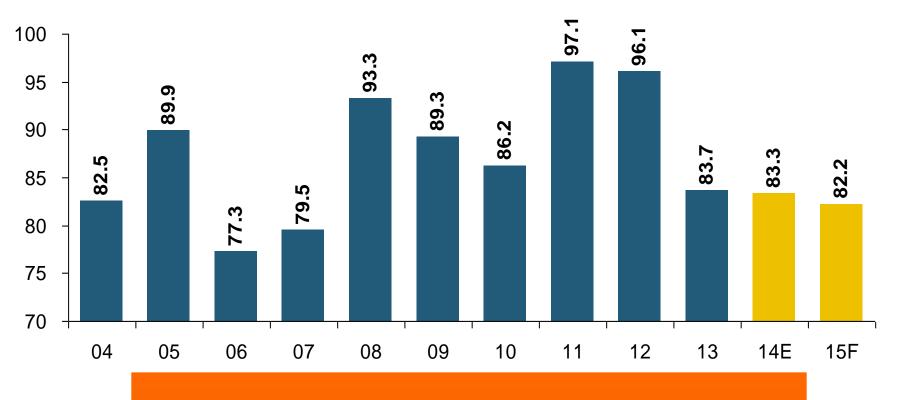


#### Commercial Multi-Peril Underwriting Performance is Expected to Remains Stable in 2015 Assuming Normal Catastrophe Loss Activity

\*2015F-2016F figures are Conning figures for the combined liability and non-liability components. Sources: A.M. Best; Conning; Insurance Information Institute.

# Inland Marine Combined Ratio: 2004–2015F





#### Inland Marine Underwriting Performance Has Been Consistently Strong for Many Years

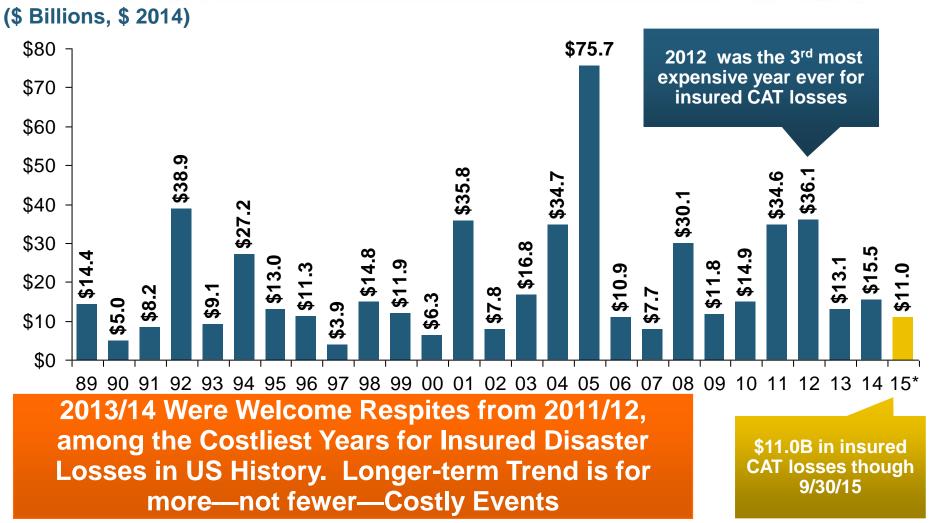
Source: A.M. Best (2004-2014E); Conning Research and Consulting (2015F).



## **Insured Catastrophe Losses**

2013/14 and YTD 2015 Experienced Below Average CAT Activity After Very High CAT Losses in 2011/12 Winter Storm Losses Far Above Average in 2014 and 2015

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



\*Through 9/30/15 in 2015 dollars.

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

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

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### US Insured CAT Losses Through Q3to Date: INSURANCE **30 Events = \$11 Billion in Claims**

## PCS Cat Activity 2015

30 cats YTD \$10.977B thru 3<sup>rd</sup> Quarter 2 7 winter storms 19 wind and thunderstorms 2 wildland fires I tropical storm 1 riot • 27 designated cats \$21B in insured loss

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#### Thunderstorms Drive 2015 Activity

Source: PCS; Insurance information Institute.

### Top 10 Insured CAT Losses Through 2015 Q3: 30 Events = \$11 Bill. in Claims



Period	States	Storm Family	Estimated Loss \$
February 16-22	CT, DC, DE, IL, KY, MA, MD, ME, MI, NC, NH, NJ, NY, OH, PA, RI, SC, TN, VA, VT	Winter Storm	\$2,063,412,300
April 7-10	AR, IA, IL, IN, KS, KY, MI, MO, NC, OH, OK, PA, TN, TX, WI, WV	Wind and Thunderstorm	\$1,121,098,000
May 23-28	AR, CO, GA, KS, LA, OH, OK, SC, TX	Wind and Thunderstorm	\$1,039,700,000
April 18-21	AD, AR, FL, GA, KS, LA, MS, NC, OK, PA, SC, TN, TX	Wind and Thunderstorm	\$939,147,000
June 21-25	CO, CT, DE, IA, IL, MD, MI, ND, NJ, NY, PA, SD, VA, WI	Wind and Thunderstorm	\$804,557,000
May 6-13	CO, IA, KS, NE, OK, SD, TX	Wind and Thunderstorm	\$771,195,000
April 24-28	AD FL, GA, KY, LA, MS, TX	Wind and Thunderstorm	\$686,805,000
February 14-15	CT, DE, MA, MD, NH, NJ, NY, PA, RI, VA	Winter Storm	\$466,200,300
June 3-8	CO, IL	Wind and Thunderstorm	\$370,220,000
March 25-26	AR, KS, MO, OK	Wind and Thunderstorm	\$340,591,000

Source: PCS; Insurance information Institute.

### Top 10 Largest NFIP Flood Claim Payout Events



Rank	Date	Event	Location	Number of paid losses	Amount paid (\$ millions)	Average paid loss
1	Aug. 2005	Hurricane Katrina	AL, FL, GA, LA, MS, TN	167,971	\$16,316	\$97,134
2	Oct. 2012	Superstorm Sandy	CT, DC, DE, MA, MD, ME, NC, NH, NJ, NY, OH, PA, RI, VA, VT, WV	129,235	7,946	61,482
3	Sep. 2008	Hurricane Ike	AR, IL, IN, KY, LA, MO, OH, PA, TX	46,589	2,689	57,713
4	Sep. 2004	Hurricane Ivan	AL, DE, FL, GA, LA, MD, MS, NJ, NY, NC, OH, PA, TN, VA, WV	28,290	1,612	56,964
5	Aug. 2011	Hurricane Irene	CT, DC, DE, MA, MD, ME, NC, NH, NJ, NY, PA, RI, VA, VT	44,228	1,337	30,226
6	Jun. 2001	Tropical Storm Allison	FL, LA, MS, NJ, PA, TX	30,784	1,107	35,955
7	May 1995	Louisiana Flood	LA	31,343	585	18,667
8	Aug. 2012	Tropical Storm Isaac	AL, FL, LA, MS	11,992	548	45,728
9	Sep. 2003	Hurricane Isabel	DE, MD, NJ, NY, NC, PA, VA, WV	19,931	500	25,072
10	Sep. 2005	Hurricane Rita	AL, AR, FL, LA, MS, TN, TX	9,528	475	49,820

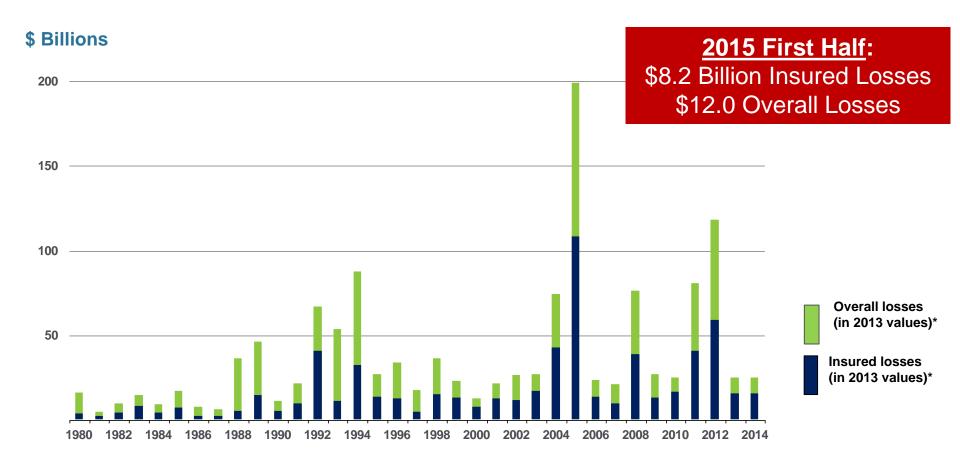
(1) Includes events from 1978 to June 30, 2015, as of August 21, 2015. Defined by the National Flood Insurance Program as an event that produces at least 1,500 paid losses. Stated in dollars when occurred.

Source: NFIP; Insurance information Institute http://www.iii.org/issue-update/flood-insurance

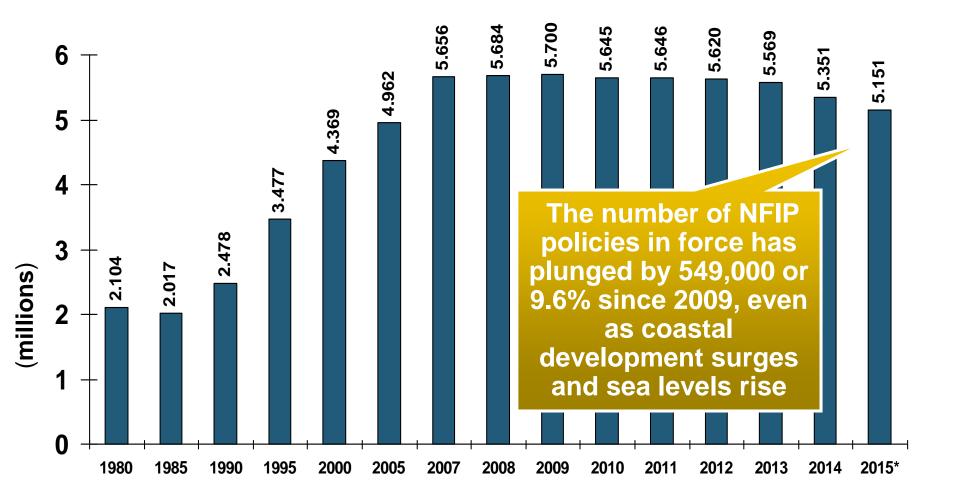
#### Loss Events in the US, 1980 – 2014 Overall and Insured Losses



Overall losses totaled \$25bn; Insured losses totaled \$15.3bn



### Number of National Flood Insurance Program Policies in Force at Year-End, 1980-2015\*



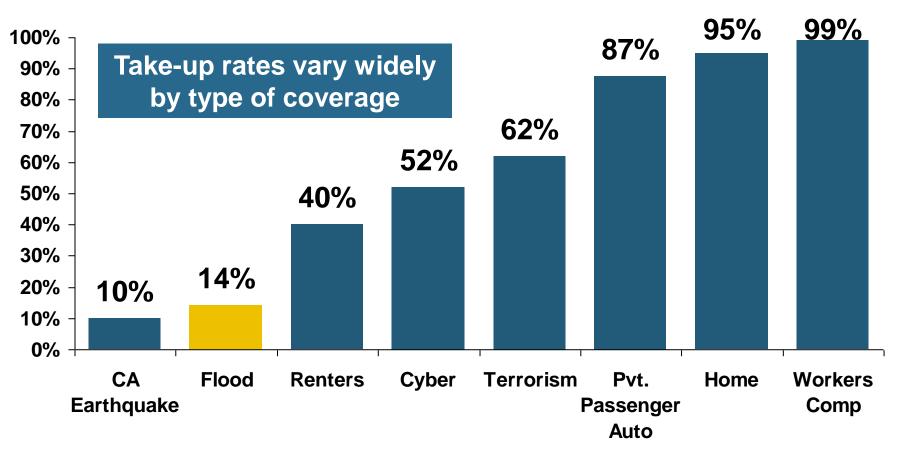
Source: National Flood Insurance Program.

\* As of July, 2015

## Take-Up Rates for Various Types of Insurance in the U.S.

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Take-Up Rate

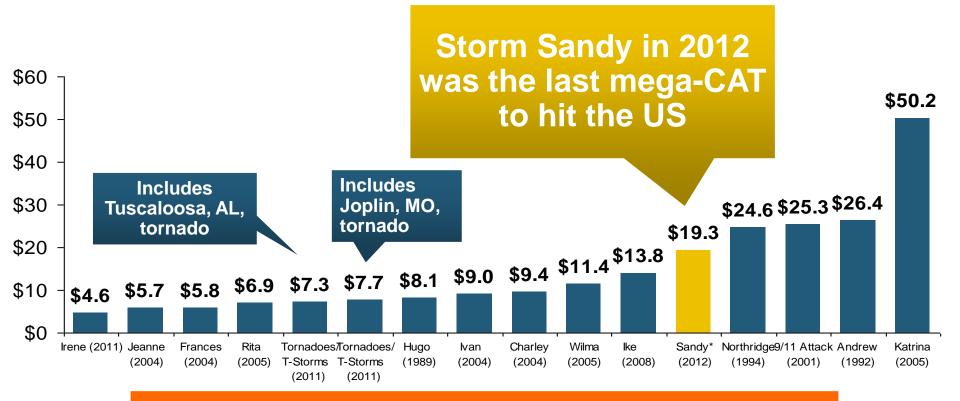


Sources: CA Earthquake (WSJ, <u>http://www.wsj.com/articles/california-pushes-homeowners-to-insure-against-earthquakes-1440980138</u>); Flood and Renters (I.I.I. June 2015 Pulse Survey); Cyber (Advisen, 2015); Terrorism (Marsh Global Analytics, *2014 Terrorism Risk Insurance Report*, April 2014; data for 2013); Pvt. Passenger Auto (Insurance Research Council, *Uninsured Motorists*, 2014 Edition, data for 2012); Home and Workers Comp (I.I.I. estimates); Insurance Information Institute research.

### Top 16 Most Costly Disasters in U.S. History—Katrina Still Ranks #1



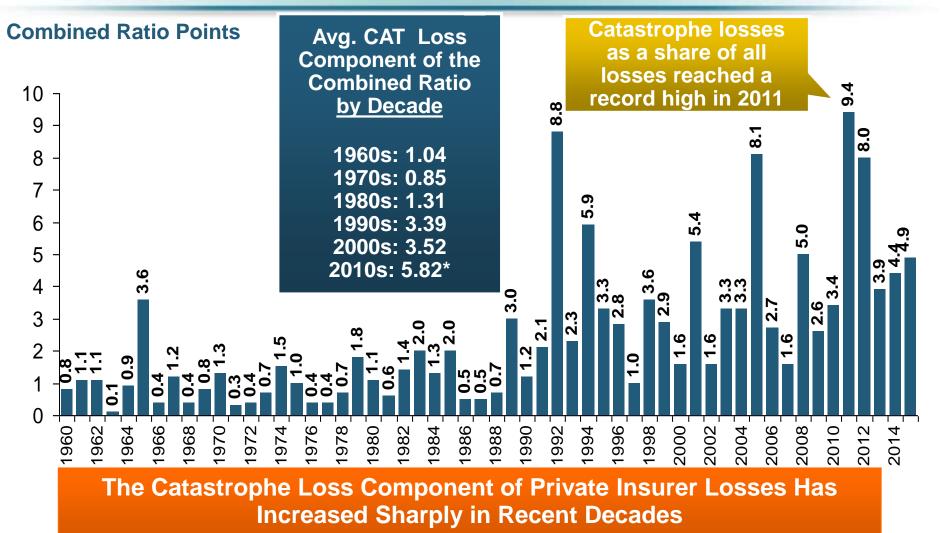
(Insured Losses, 2014 Dollars, \$ Billions)



#### 12 of the 16 Most Expensive Events in US History Have Occurred Since 2004

Sources: PCS; Insurance Information Institute inflation adjustments to 2014 dollars using the CPI.

# Combined Ratio Points Associated with Catastrophe Losses: 1960 – 2015F\*



\*2010s represent 2010-2014.

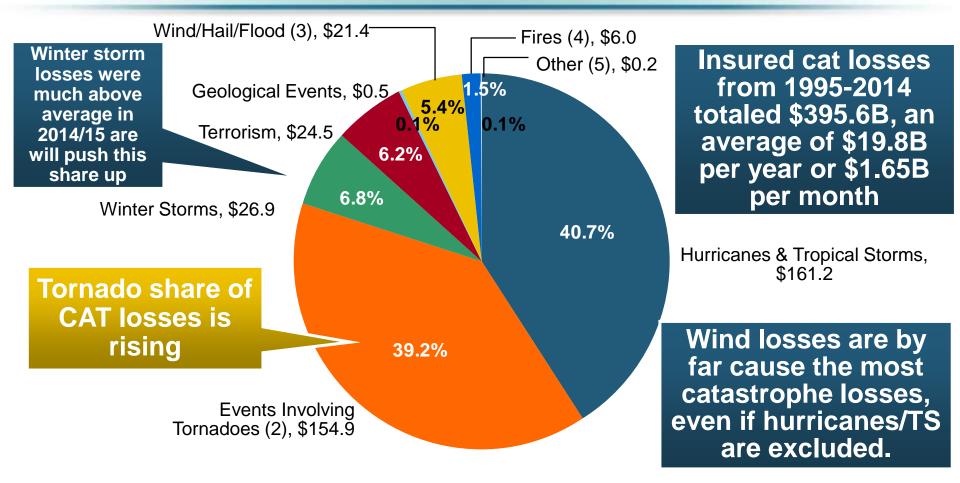
Notes: Private carrier losses only. Excludes loss adjustment expenses and reinsurance reinstatement premiums. Figures are adjusted for losses ultimately paid by foreign insurers and reinsurers.

Source: ISO (1960-2010); A.M. Best (2011-15E) Insurance Information Institute.

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### Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1995–2014<sup>1</sup>



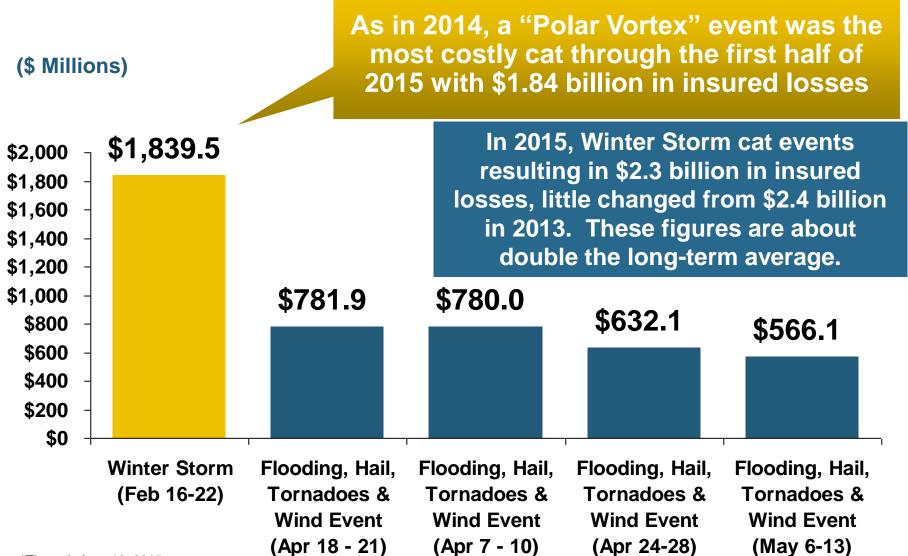


- 1. Catastrophes are defined as events causing direct insured losses to property of \$25 million or more in 2014 dollars.
- 2. Excludes snow.
- 3. Does not include NFIP flood losses
- 4. Includes wildland fires

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.

## Top 5 Insured Catastrophe Losses in 2015\*

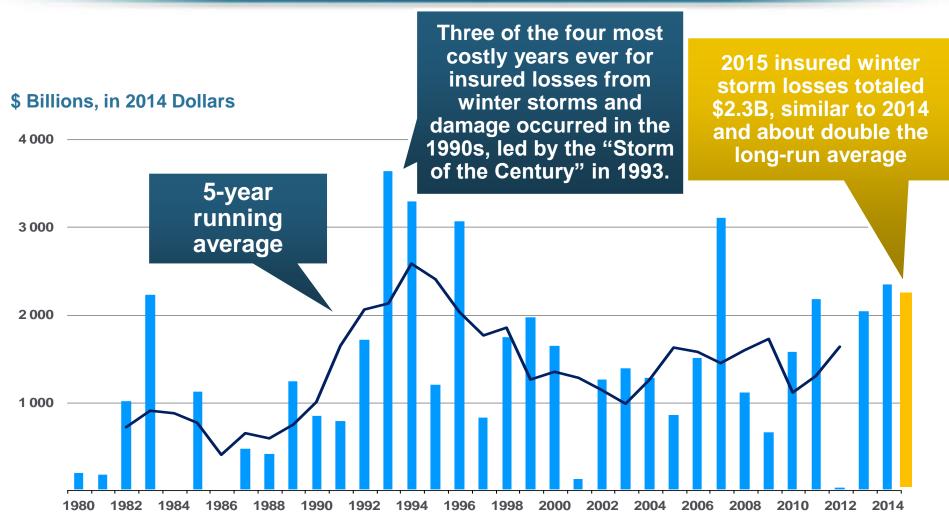




\*Through June 10, 2015.

Sources: PCS unit of Verisk Analytics; Insurance Information Institute.

## Winter Storm and Winter Damage Events in the US, 1980-2015 (2014 US\$)



\*Winter storms include winter damage, blizzard, snow storm and cold wave

\*\*Losses adjusted to inflation based on country CPI

Source: Property Claim Services, MR NatCatSERVICE.

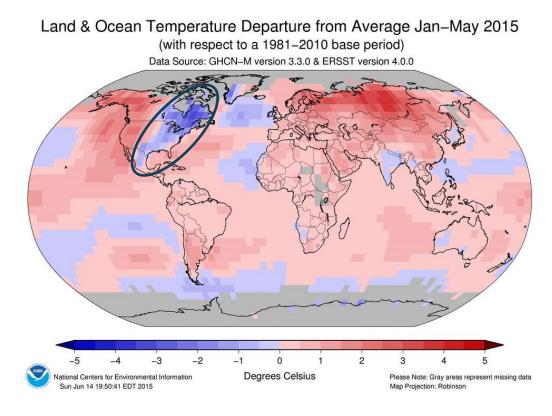
As of July 1, 2015	Number of Events	Fatalities	Estimated Overall Losses (US \$m)	Estimated Insured Losses (US \$m)*
Severe Thunderstorm	38	66	7,000	5,100
Winter Storms & Cold Waves	11	80	3,800	2,900
Flood, Flash Flood	10	4	500	150
Earthquake & Geophysical	1	-	-	-
Tropical Cyclone	2	4	Loss est. in progress	Loss est. in progress
Wildfire, Heat Waves, & Drought	18	-	1,300	Minor market loss
Totals	80	154	12,600	8,200

As of January, 2015	Number of Events	Fatalities	Estimated Overall Losses (US \$m)	Estimated Insured Losses (US \$m)
Severe Thunderstorm	62	98	17,000	12,300
Winter Storm, winter damage, cold wave, snow storm	13	115	3,700	2,300
Flood, flash flood, storm surge	20	5	1,800	500
Earthquake & Geophysical, landslides	11	45	750	150
Tropical Cyclone	2	1	95	Minor market losses
Wildfire, Heat, & Drought	11	2	1,700	Minor market losses
Totals	119	266	25,000	15,300

## The World is Warmer...With One Big Exception!

#### **HIGHLIGHTS**

- 2014 was the warmest year across global land and ocean surfaces since records began in 1880.
- 9 of the 10 warmest years in the 135-year period of record have occurred in the 21<sup>st</sup> century. 1998 currently ranks as the fourth warmest year on record.
- January to May 2015 warmest first five months on record!



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### Top 11 Insured Loss Events from Riots and Civil Commotion



Year	Deaths	Date	State	Insured Loss When Occurred	Insured Losses (2014 \$MM)
1992	14	Apr 29 - May 4	CA	775,000,000	1,307.7
1980	62	May 17 - 19	FL	65,250,000	187.5
1967	48	Jul 23 - 31	MI	41,500,000	294.2
1965	87	11-Aug	CA	38,000,000	285.6
1977	99	Jul 13 - 14	NY	28,000,000	109.4
1967	47	Jul 12 - 21	NJ	11,000,000	78.0
1966	20	12-Jul	IL	4,000,000	29.2
2015	0	Apr 18 – May 1	MD	23,900,000	23.9*
1971	63	Jun 13 - 15	NM	3,000,000	17.5
1977	11	Jul 13 - 14	NY	2,000,000	7.8

April 2015 Baltimore riots were designated a PCS CAT event on April 29 (first PCS designation for a riot in 23 years) as of 6/10/15 insured losses totaled \$23.9 million (2014 Ferguson riots did not receive PCS designation)

\*As of 6/10/15.

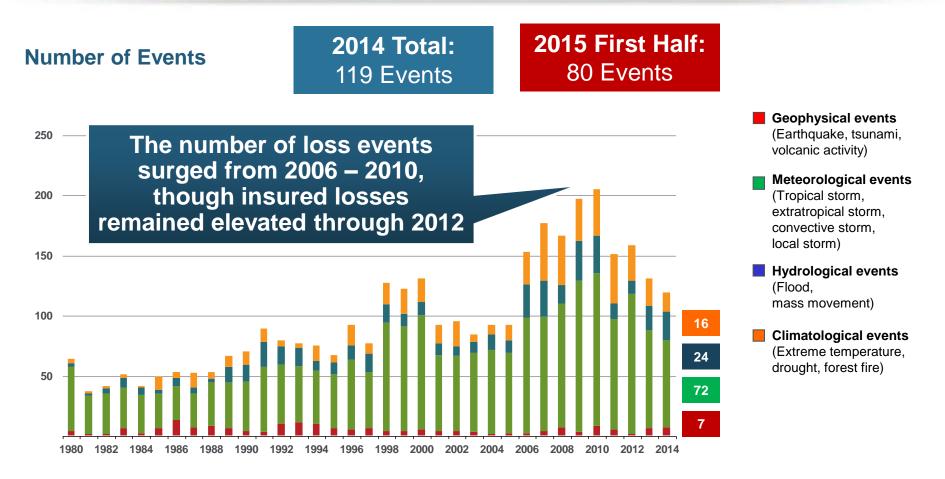
Source: PCS unit of Verisk Analytics; Insurance Information Institute

### Insurance Coverage for Riots and Civil Commotions: Home, Auto and Business



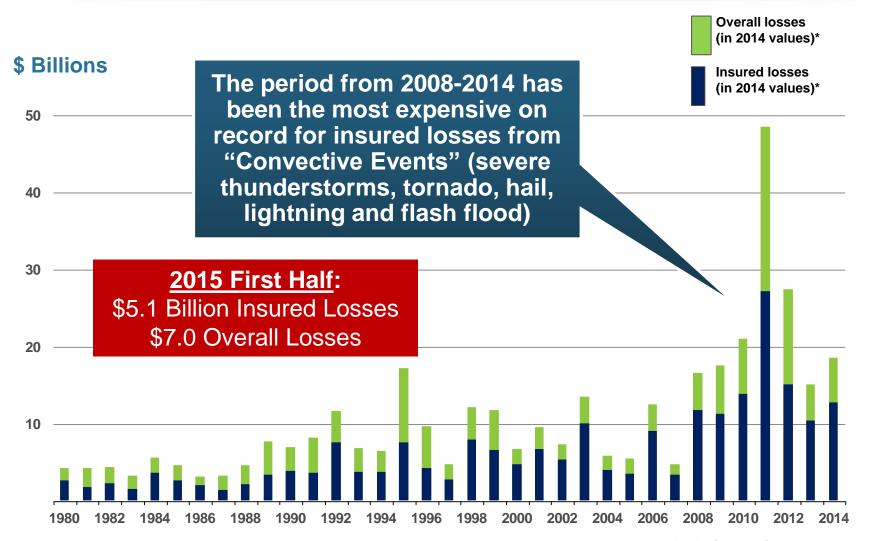
- Auto, homeowners, and business insurance policies generally include coverage for property losses caused by riots and civil commotions
- Homeowners policies pay to repair, or rebuild, an insured home if its structure is damaged or destroyed as the result of a riot or civil commotion, as well as to replace the homeowner's personal belongings if they are damaged or stolen during the event.
  - If the home is rendered uninhabitable by the damage caused by a riot or civil commotion, policyholders can file an additional living expenses (ALE) claim to finance their temp. housing expenses until the residence has been repaired.
- The optional comprehensive coverage on an auto insurance policy reimburses losses to a vehicle due to damage caused by falling objects, fire, riots and vandalism, among other things.
- Standard business property insurance policies provide coverage for the structure of the building as well as the contents inside, and cover losses arising from riots or civil commotion. Business interruption (BI) coverage, whereby the policyholder can file a claim for lost income, is usually only triggered when the insured business incurs direct physical damage.

### Loss events in the US, 1980 – 2014 Number of events



### Convective Loss Events in the US Overall and insured losses, 1980 – 2014





\*Losses adjusted to inflation based on CPI

Source: Geo Risks Research, NatCatSERVICE

Analysis contains:

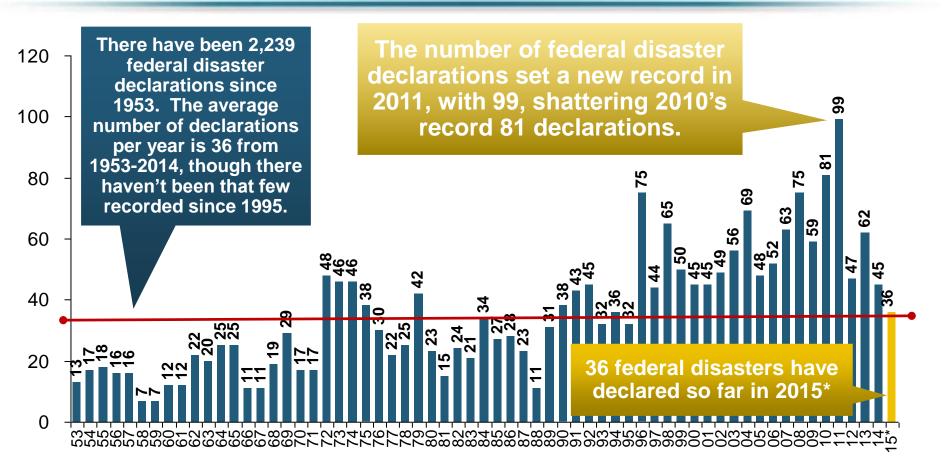
severe storm, tornado, hail, flash flood and lightning



## Federal Disaster Declarations Patterns: 1953-2015

Disaster Declarations Set New Records in Recent Years

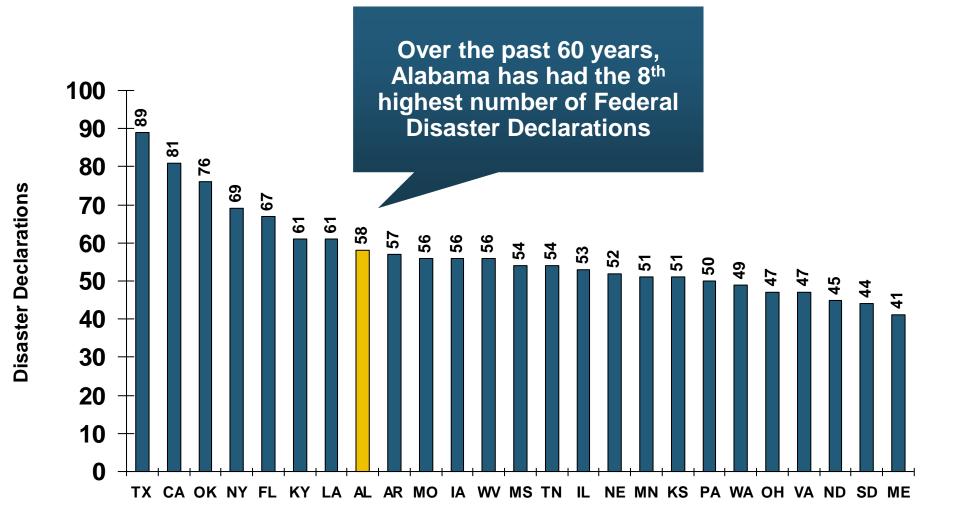
### Number of Federal Major Disaster Declarations, 1953-2015\*



#### The Number of Federal Disaster Declarations Is Generally Rising and Set New Records in 2010 and 2011 Before Dropping in 2012-2014

\*Through October 3, 2015. Source: Federal Emergency Management Administration; <u>http://www.fema.gov/disasters;</u> Insurance Information Institute.

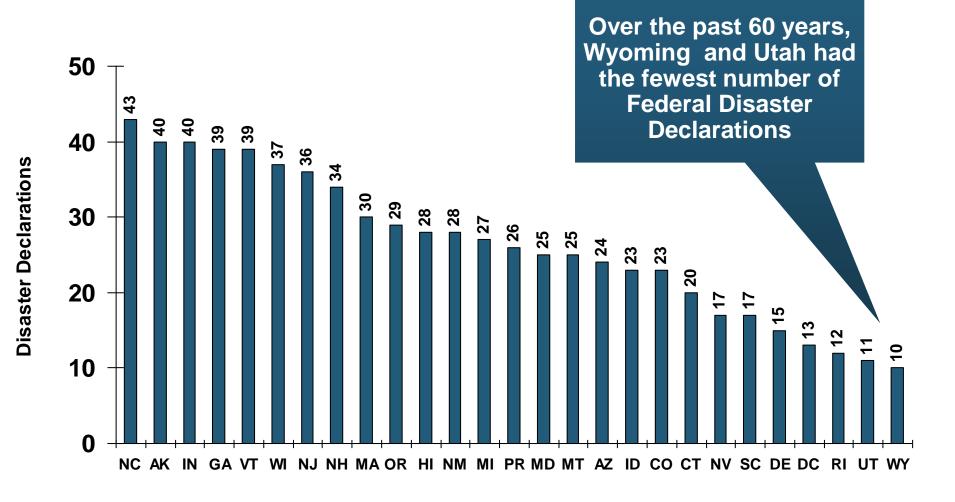
### Federal Disasters Declarations by State, 1953 – 2015: Highest 25 States\*



\*Through Oct. 3, 2015. 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 – 2015: Lowest 25 States\*

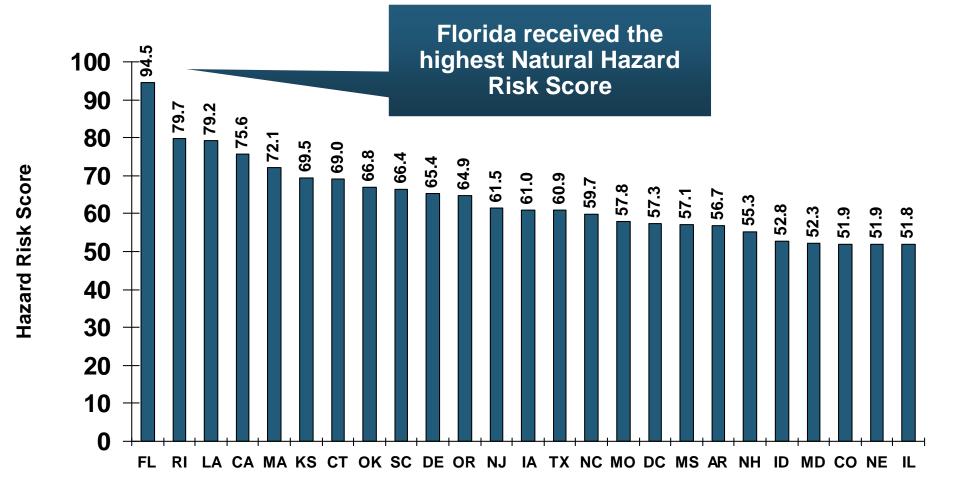


\*Through Oct. 3, 2015. Includes Puerto Rico and the District of Columbia.

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

### Natural Hazard Risk Scores, 2014 Highest 25 States\*



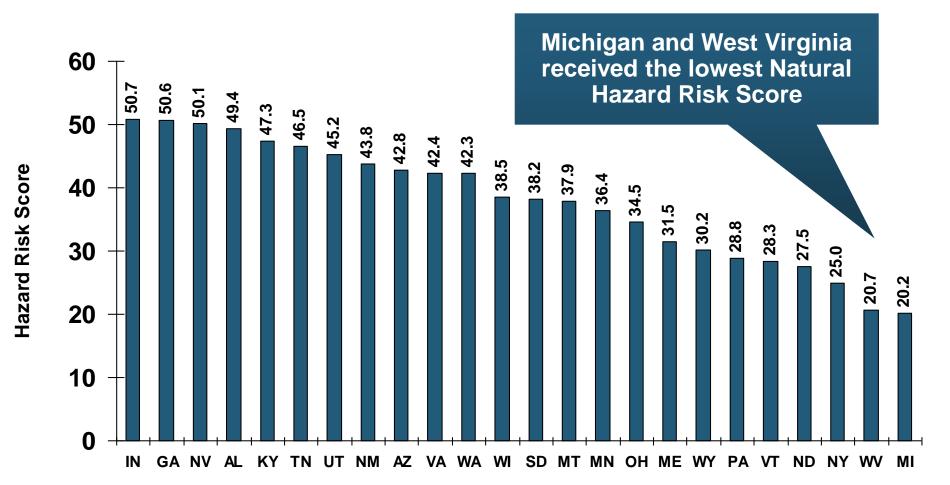


Note: Score is based on data on 9 natural hazards: flood, wildfire, tornado, storm surge, earthquake, straight-line wind, hurricane, wind, hail and sinkhole.

\*Analysis Includes DC. Excludes Alaska and Hawaii due to limited natural hazard risk data.

Sources: CoreLogic release "CoreLogic Identifies US States at Highest Risk of Property Damage Loss from Natural Hazards," Sept. 10, 2014; Insurance Information Institute.

### Natural Hazard Risk Scores, 2014 Bottom 24 States\*



Note: Score is based on data on 9 natural hazards: flood, wildfire, tornado, storm surge, earthquake, straight-line wind, hurricane, wind, hail and sinkhole.

\*Analysis Includes DC. Excludes Alaska and Hawaii due to limited natural hazard risk data.

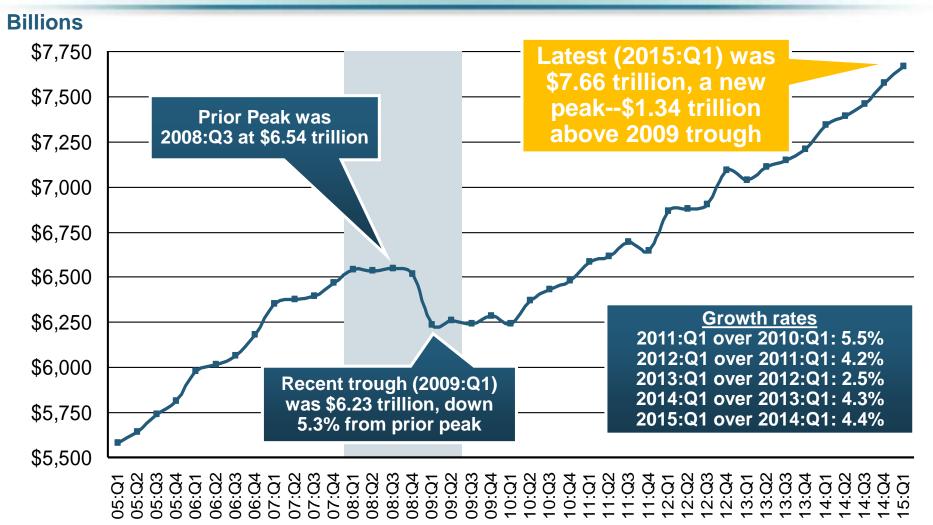
Sources: CoreLogic release "CoreLogic Identifies US States at Highest Risk of Property Damage Loss from Natural Hazards," Sept. 10, 2014; Insurance Information Institute.



## Workers Compensation Operating Environment

### Workers Comp Results Have Improved Substantially in Recent Years

### Nonfarm Payroll (Wages and Salaries): Quarterly, 2005–2015:Q1

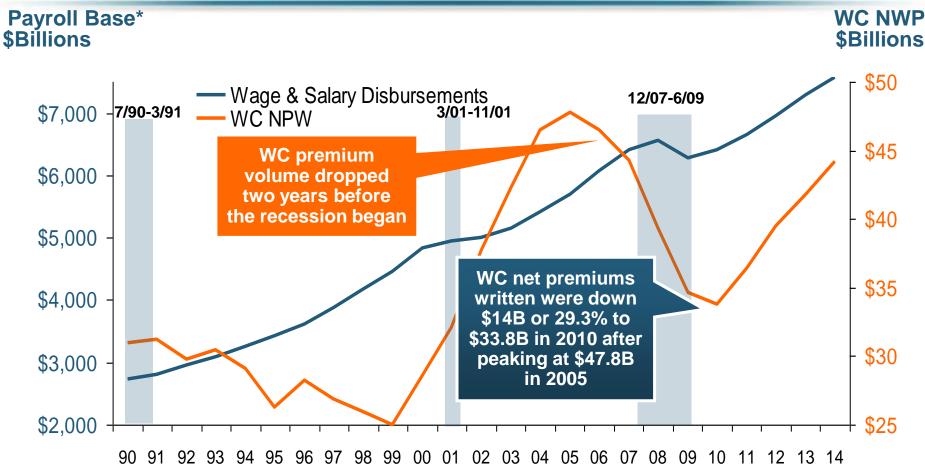


Note: Recession indicated by gray shaded column. Data are seasonally adjusted annual rates.

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, 1990-2014P

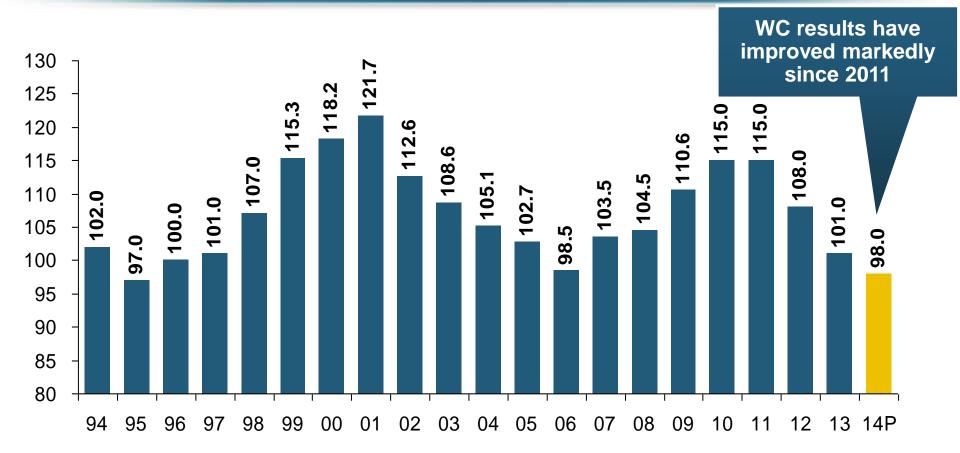


#### Continued Payroll Growth and Rate Gains Suggest WC NWP Will Grow Again in 2015

\*Private employment; Shaded areas indicate recessions. WC premiums for 2014 are from NCCI. Sources: NBER (recessions); Federal Reserve Bank of St. Louis at <u>http://research.stlouisfed.org/fred2/series/WASCUR</u>; NCCI; I.I.I.

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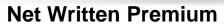
### Workers Compensation Combined Ratio: 1994–2014P

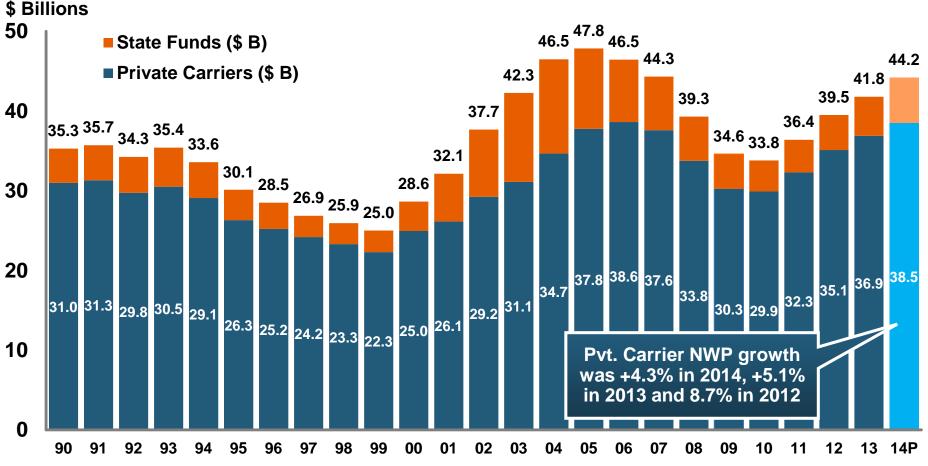


Workers Comp Results Began to Improve in 2012. Underwriting Results Deteriorated Markedly from 2007-2010/11 and Were the Worst They Had Been in a Decade.

Sources: A.M. Best (1994-2009); NCCI (2010-2014P) and are for private carriers only; Insurance Information Institute.

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





p Preliminary

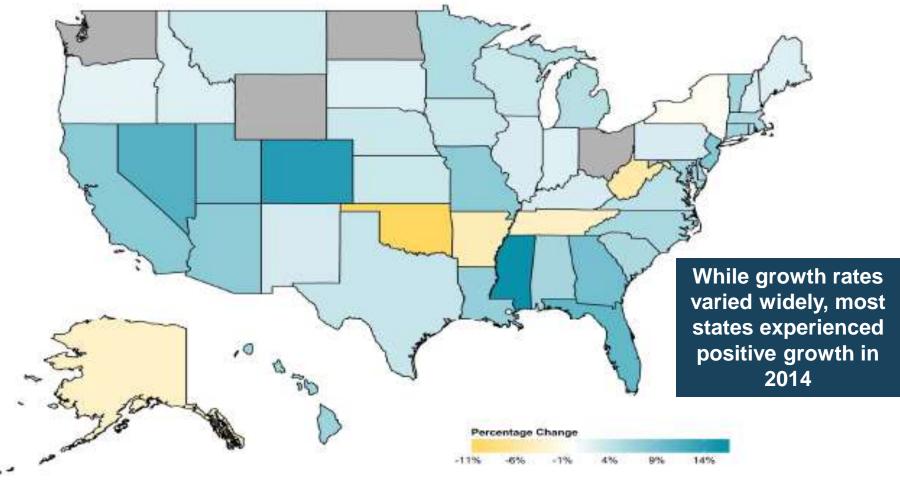
Source: NCCI from Annual Statement Data.

Includes state insurance fund data for the following states: AZ, CA, CO, HI, ID, KY, LA, MD, MO, MT, NM, OK, OR, RI, TX, UT. Each calendar year total for State Funds includes all funds operating as a state fund that year.

### 2014 Workers Compensation Direct Written Premium Growth, by State\*



### **PRIVATE CARRIERS: Overall 2014 Growth = +4.6%**



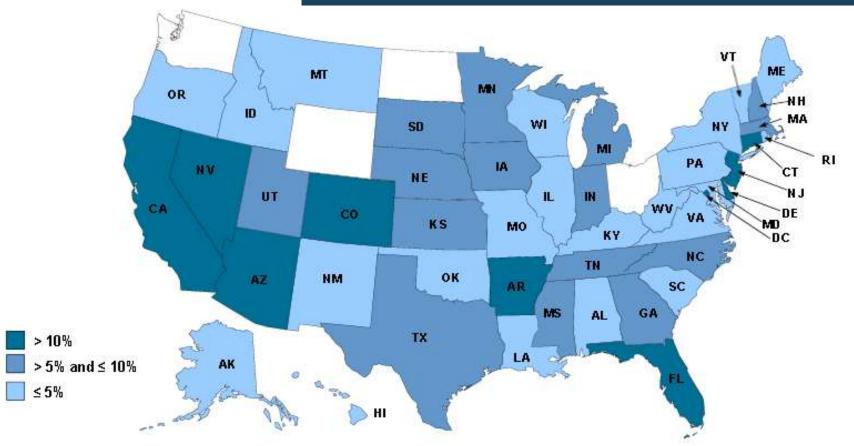
\*Excludes monopolistic fund states (in gray): OH, ND, WA and WY. Source: NCCI.

### 2013 Workers Compensation Direct Written Premium Growth, by State\*



#### **PRIVATE CARRIERS: Overall 2013 Growth = +5.4%**

While growth rates varied widely, all states experienced positive growth in 2013



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

# Workers Compensation Components of Written Premium Change, 2013 to 2014

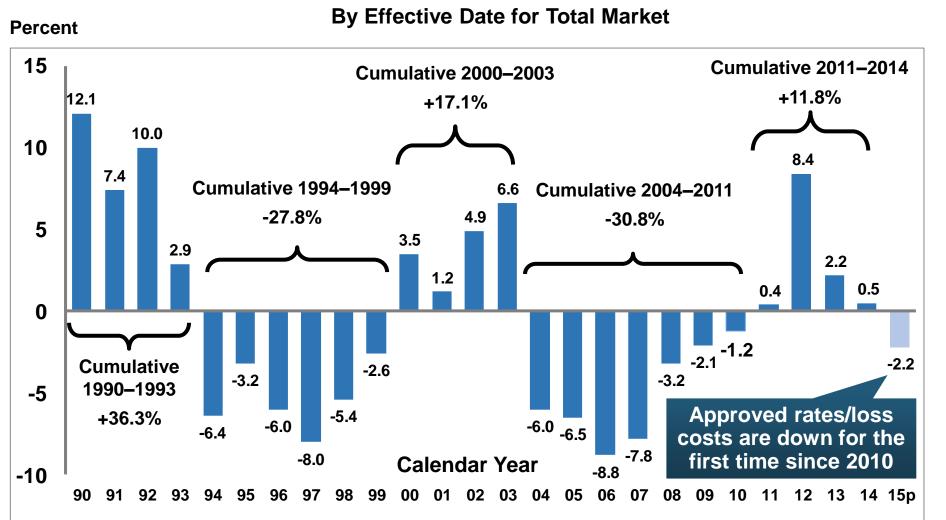


Written Premium Change from 2013 to 2	2014
Net Written Premium—Countrywide	+4.6%
Direct Written Premium—Countrywide	+4.6%
Direct Written Premium—NCCI States	+4.5%
Components of DWP Change for NCCI States	
Change in Carrier Estimated Payroll	+4.7%
Change in Bureau Loss Costs and Mix	-1.4%
Change in Carrier Discounting	+0.4%
Change in Other Factors	+0.8%
Combined Effect	+4.5%

Sources: Countrywide: Annual Statement data. NCCI States: Annual Statement Statutory Page 14 for all states where NCCI provides ratemaking services. Components: NCCI Policy data.

### WC Approved Changes in Bureau Premium Level (Rates/Loss Costs)





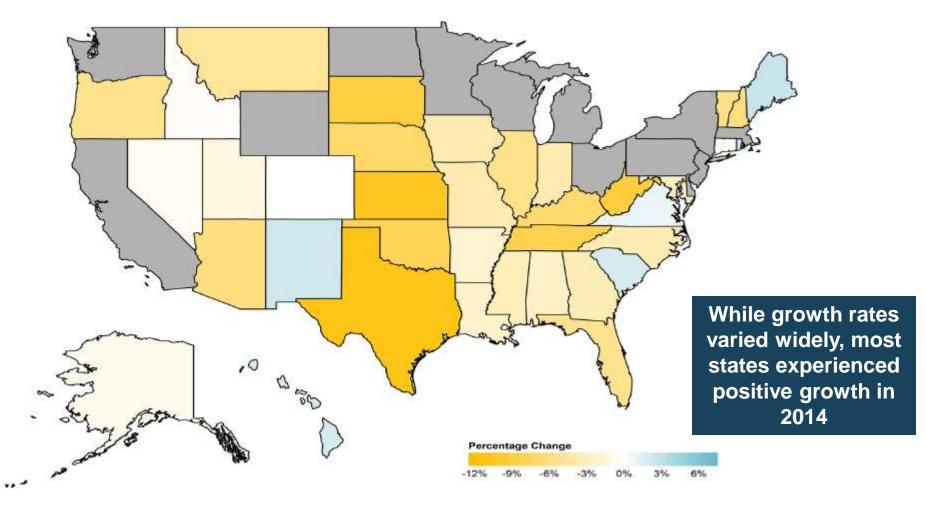
\*States approved through 4/24/15.

Note: Bureau premium level changes are countrywide approved changes in advisory rates, loss costs and assigned risk rates as filed by applicable rating organization, relative to those previously approved. Source: NCCI.

# WC Approved or Filed and Pending Change in NCCI Premium Level by State



### Latest Change for Voluntary Market



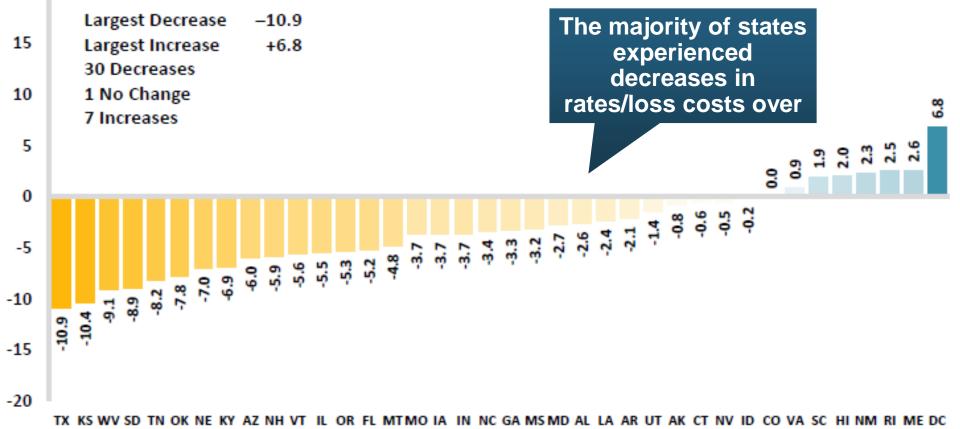
\*Excludes monopolistic fund states (in gray): OH, ND, WA and WY. Source: NCCI.

## WC Approved or Filed and Pending Change in NCCI Premium Level by State

20

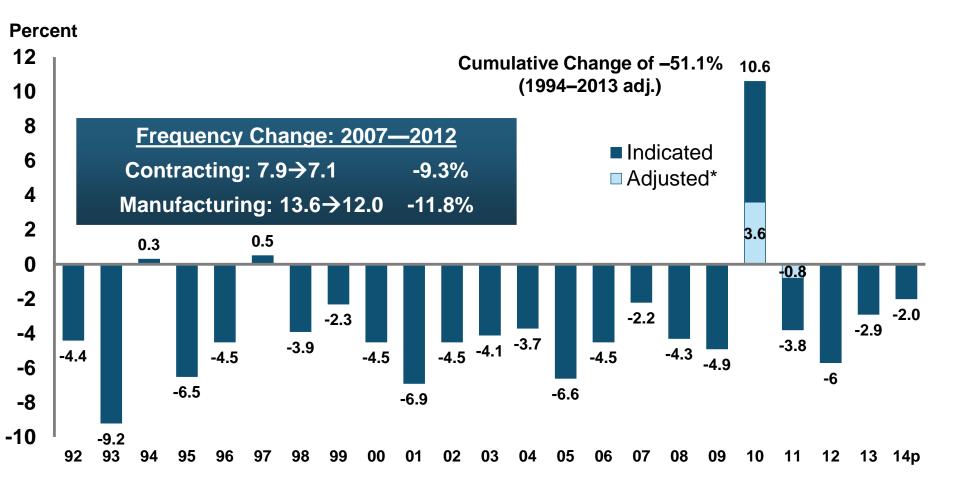






Note: Premium level changes are approved changes are approved or filed and pending changes in advisory rates, loss costs and rating values as of 4/24/15 as filed by applicable rating organization, relative to those previously approved. SC is filed and pending. IN and NC are in cooperation with state rating bureaus. Source: NCCI.

## Workers Compensation Lost-Time Claim Frequency Declined in 2014



#### **Accident Year**

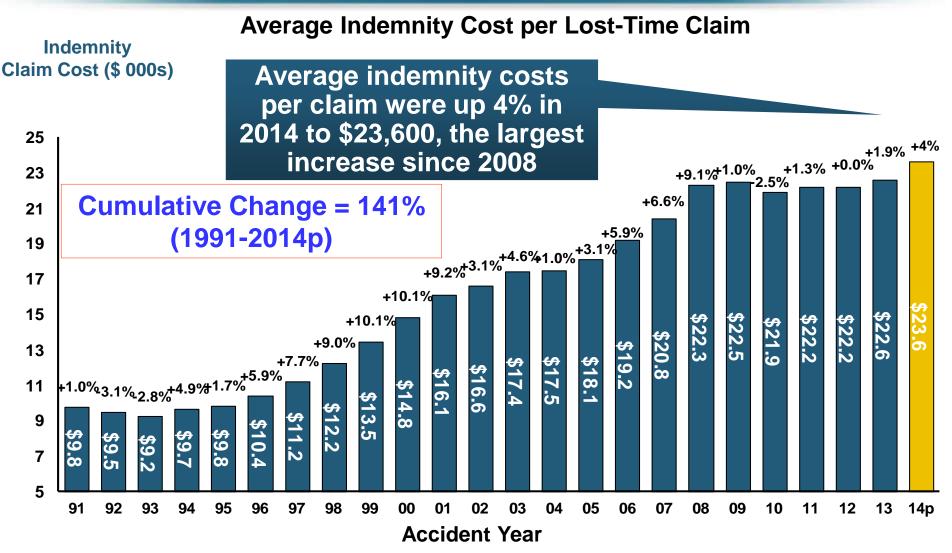
\*Adjustments primarily due to significant audit activity. 2014p: Preliminary based on data valued as of 12/31/2014.

Source: NCCI Financial Call data, developed to ultimate and adjusted to current wage an voluntary loss cost level; Excludes high deductible policies; 1994-2013: Based on data through 12/31/13. Data for all states where NCCI provides ratemaking services, excluding WV. Frequency is the number of lost-time claims per \$1M pure premium at current wage and voluntary loss cost level

INSURANCE

### Workers Comp Indemnity Claim Costs: Modest Increase in 2014



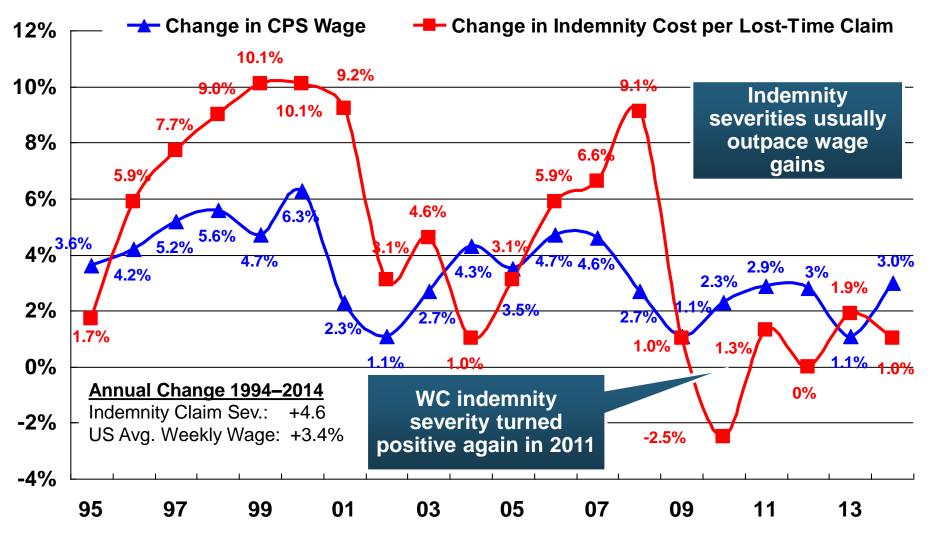


2014p: Preliminary based on data valued as of 12/31/2014.

1991-2013: Based on data through 12/31/2013, developed to ultimate

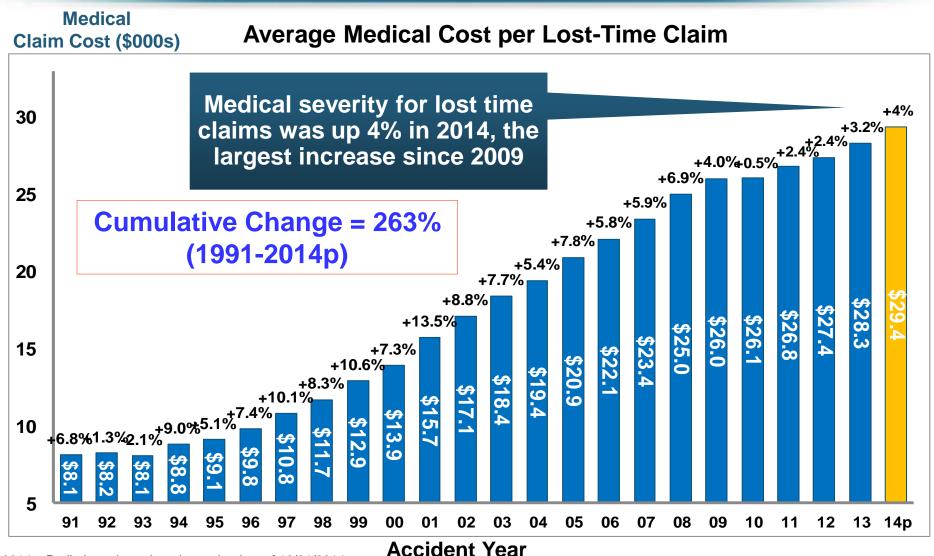
Based on the states where NCCI provides ratemaking services including state funds, excluding WV; Excludes high deductible policies.

### WC Indemnity Severity vs. Wage Inflation, **11 INFORMATION** 1995-2014p



2014p: Preliminary based on data valued as of 12/31/2014; 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 Medical Severity: Moderate Increase in 2014

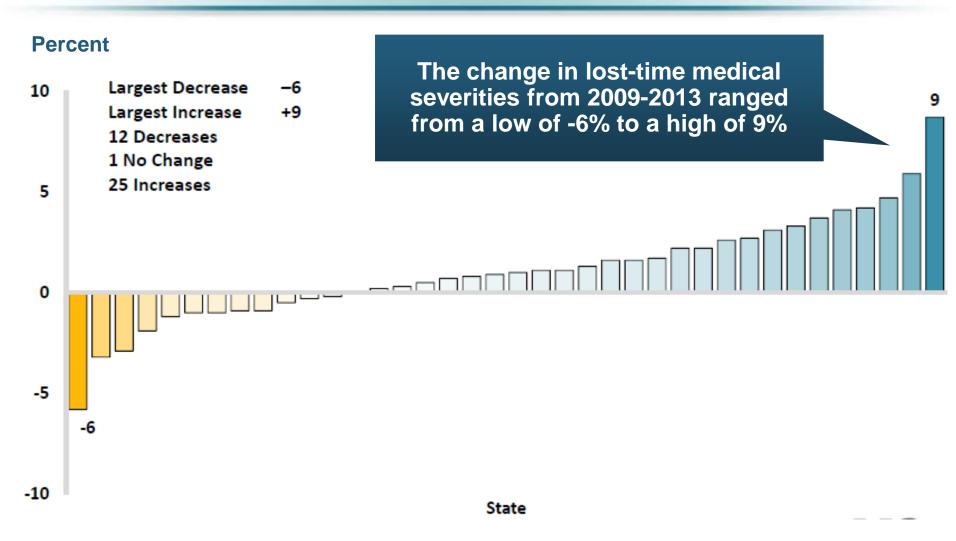


2014p: Preliminary based on data valued as of 12/31/2014.

1991-2013: Based on data through 12/31/2013, developed to ultimate

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

### Workers Comp Change in Medical Severity by State, Avg. Annual Change, 2009-2013

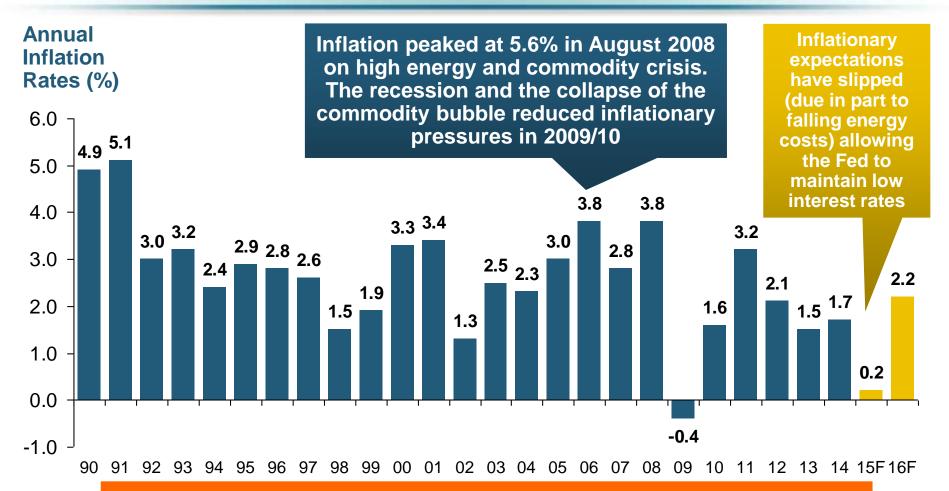


Source: NCCI's Analysis of Frequency and Severity of Claims Across the Country as of 12/31/13 on ncci.com. Values reflect methodology and state data underlying the most recent rate/lost cost filing. TX changes are for the years 2010-2013.

INSURANCE

### Annual Inflation Rates, (CPI-U, %), 1990–2016F

#### INSURANCE INFORMATION INSTITUTE



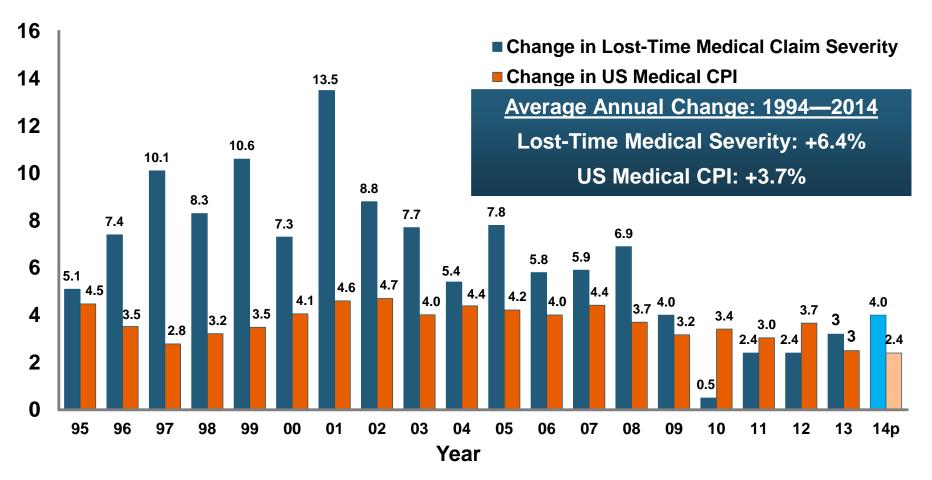
### Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators, 5/15 (forecasts).

### Workers Compensation Change in Medical Severity

**Comparison to Change in Medical Consumer Price Index (CPI)** 

#### **Percent Change**



2014p: Preliminary based on data valued as of 12/31/2014.

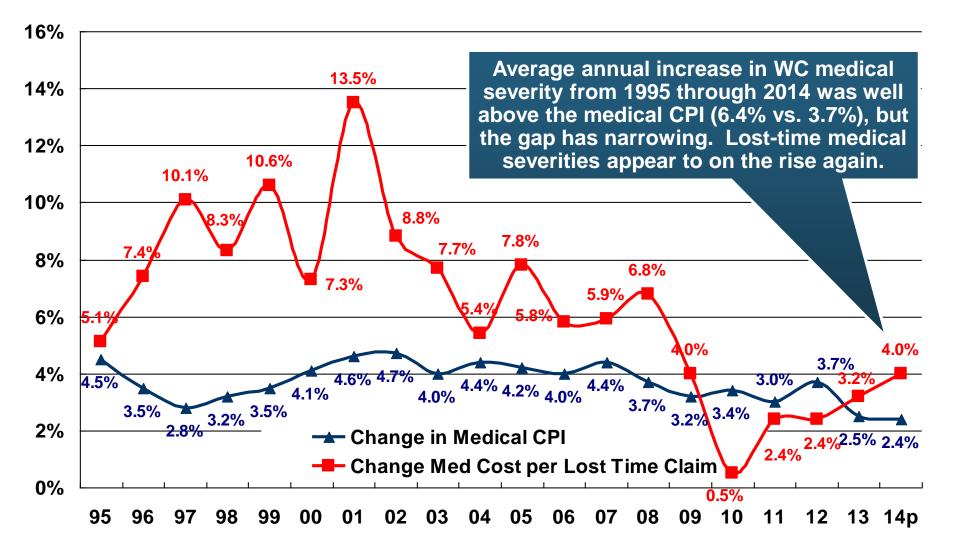
Sources: Severity: 995-2013: Based on data through 12/31/2013, developed to ultimate

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

US Medical CPI: US Bureau of Labor Statistics.



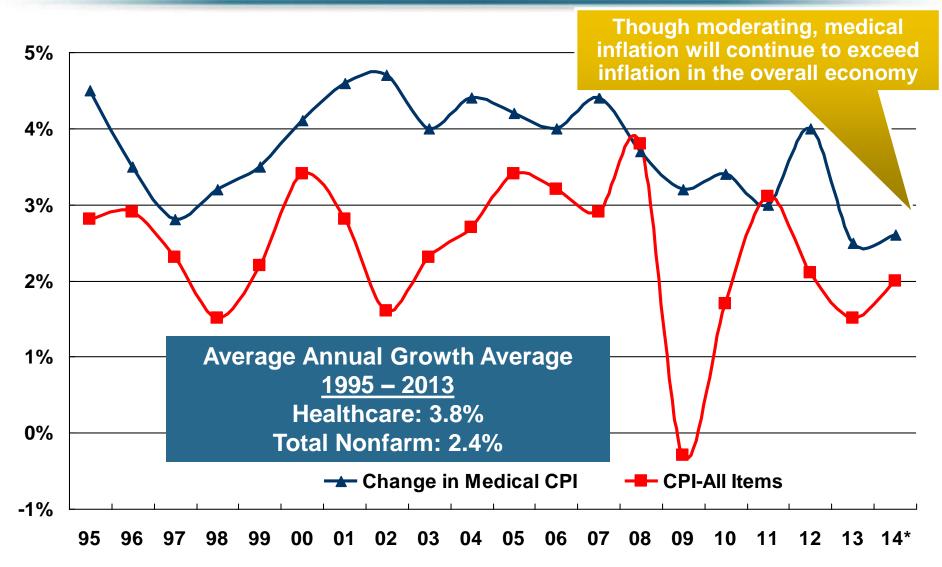
### WC Medical Severity Generally Outpaces the Medical CPI Rate



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

### Medical Cost Inflation vs. Overall CPI, 1995 – 2014\*



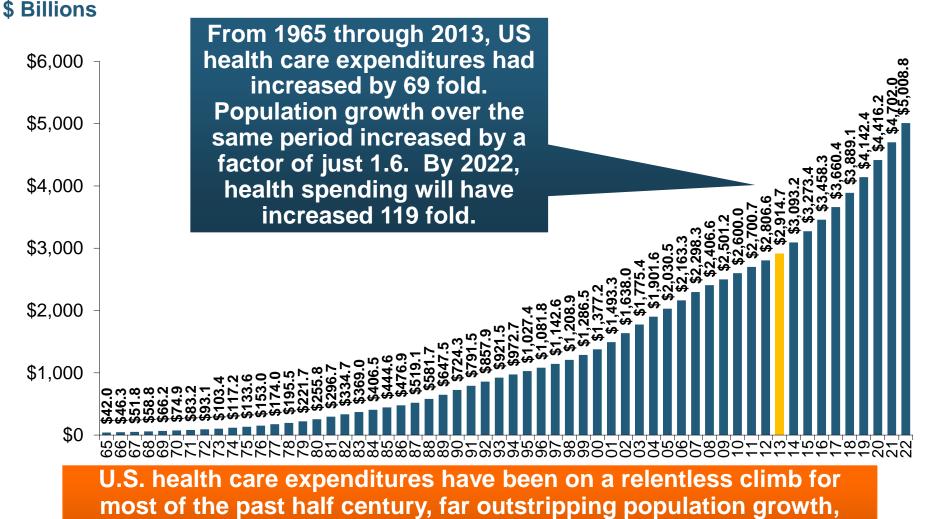


\*July 2014 compared to July 2013.

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

### U.S. Health Care Expenditures, 1965–2022F



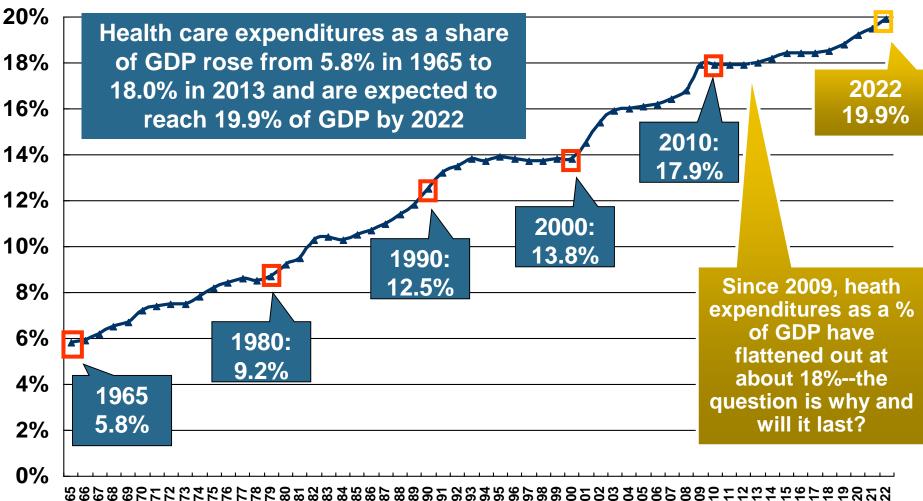


inflation of GDP growth

Sources: Centers for Medicare & Medicaid Services, Office of the Actuary at <u>http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html</u> accessed 3/14/14; Insurance Information Institute.

# National Health Care Expenditures as a Share of GDP, 1965 – 2022F\*





Sources: Centers for Medicare & Medicaid Services, Office of the Actuary at <u>http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html</u> accessed 3/14/14; Insurance Information Institute.

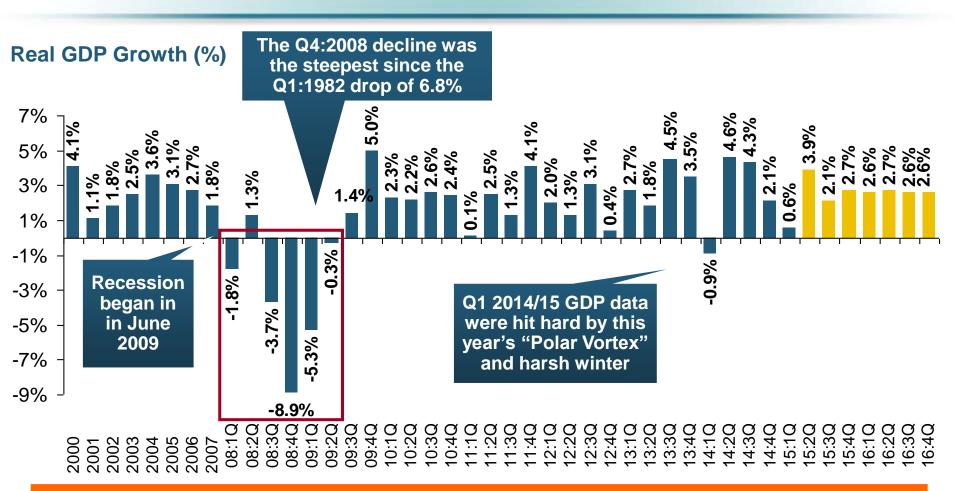


# 8. THE ECONOMY

# The Strength of the Economy Will Greatly Influence Insurer Exposure Base Across Most Lines

# **US Real GDP Growth\***





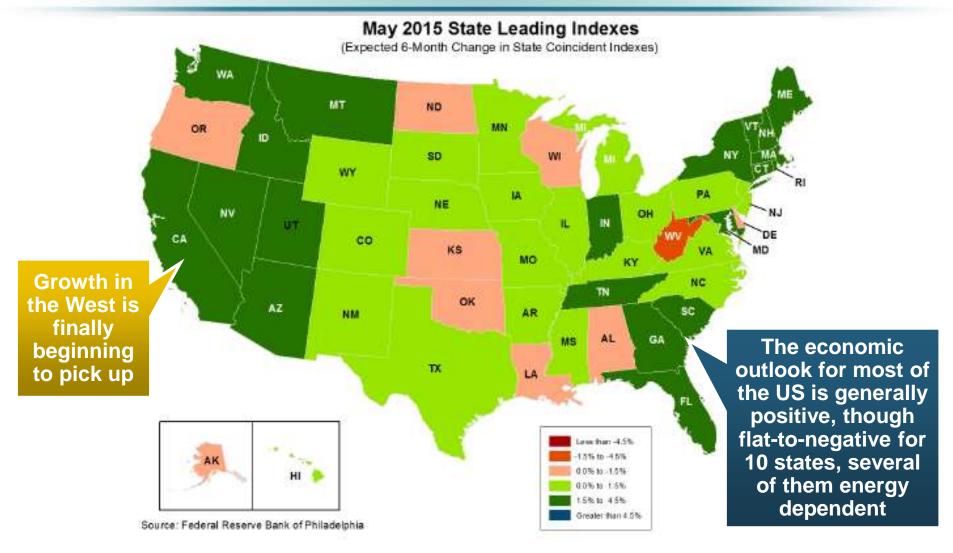
# Demand for Insurance Should Increase in 2016 as GDP Growth Continues at a Steady, Albeit Moderate Pace and Gradually Benefits the Economy Broadly

\* Estimates/Forecasts from Blue Chip Economic Indicators.

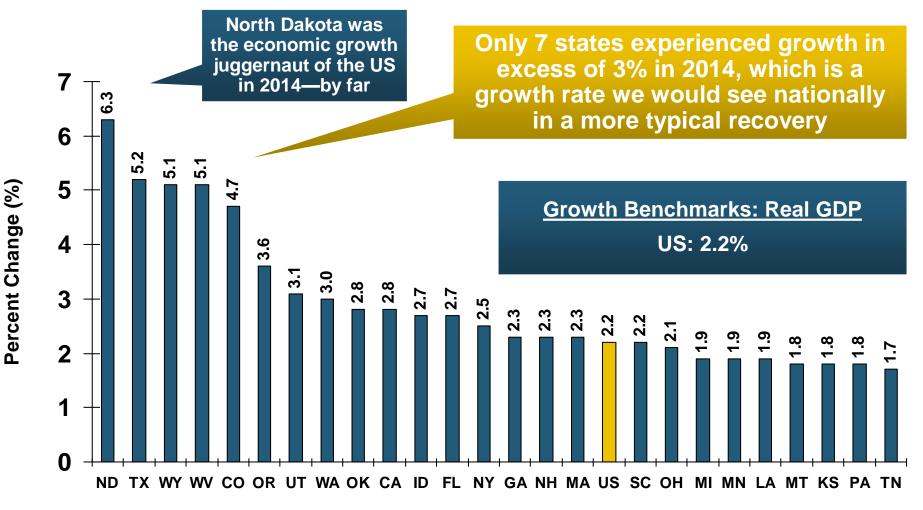
Source: US Department of Commerce, Blue Economic Indicators 10/15; Insurance Information Institute.

# State Leading Economic Indicators through November 2015





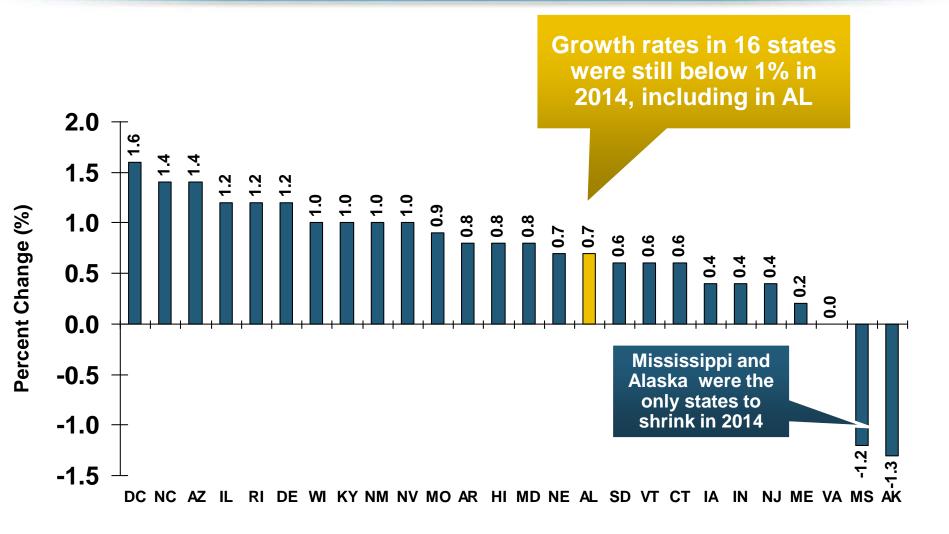
### Real GDP by State Percent Change, 2014\*: INSURANCE Highest 25 States



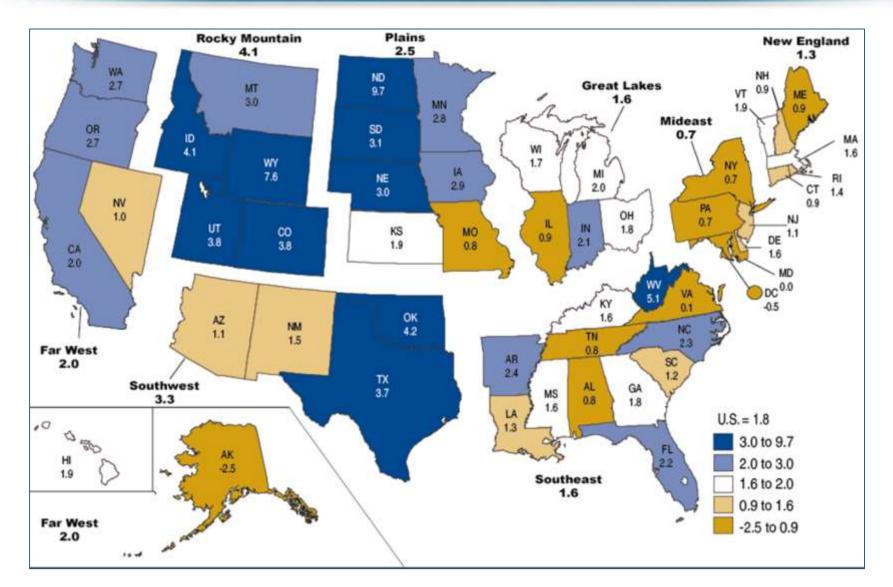
\*Advance statistics

Sources: U.S. Bureau of Economic Analysis; Insurance Information Institute.

# Real GDP by State Percent Change, 2014\*: INSURANCE Lowest 25 States



### Percent Change in Real GDP by State, 2013



Sources: US Bureau of Economic Analysis; Insurance Information Institute.



# **Labor Market Trends**

Massive Job Losses Sapped the Economy and Commercial/Personal Lines Exposure, But Trend Has Greatly Improved

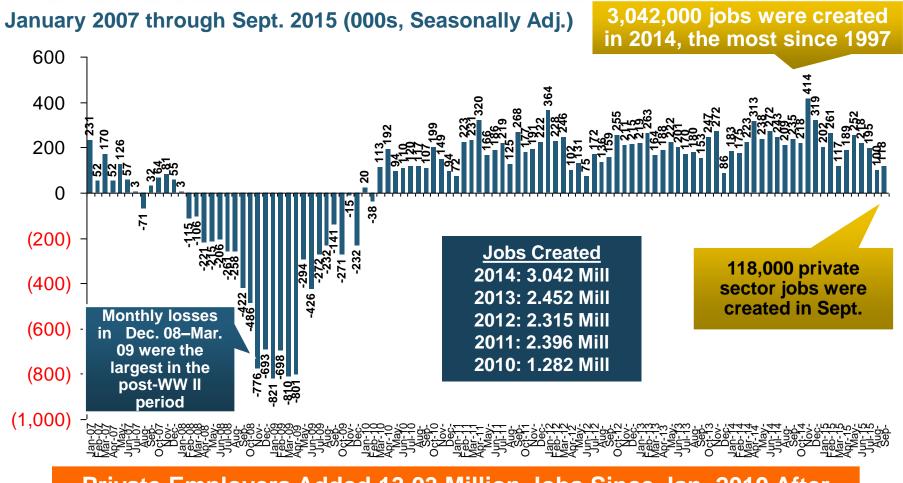
### Unemployment and Underemployment Rates: Still Too High, But Falling



#### January 2000 through September 2015, **Seasonally Adjusted (%)** 18 **U-6 soared from** "Headline" Unemployment Rate U-3 8.0% in March 2007 to 17.5% in Unemployment + Underemployment Rate 16 **October 2009:** U-6 Stood at 10.0% 14 in Sept. 2015. 8% to 10% is "normal." 12 10 8 "Headline" 6 unemployment was 5.1% in Sep. 4 2015. 4.5% to 5.5% is "normal." 2 03 80 00 01 02 04 05 06 07 09 10 11 12 13 14 15 Stubbornly high unemployment and underemployment constrain overall economic growth, but the job market is continuing to improve.

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

# Monthly Change in Private Employment

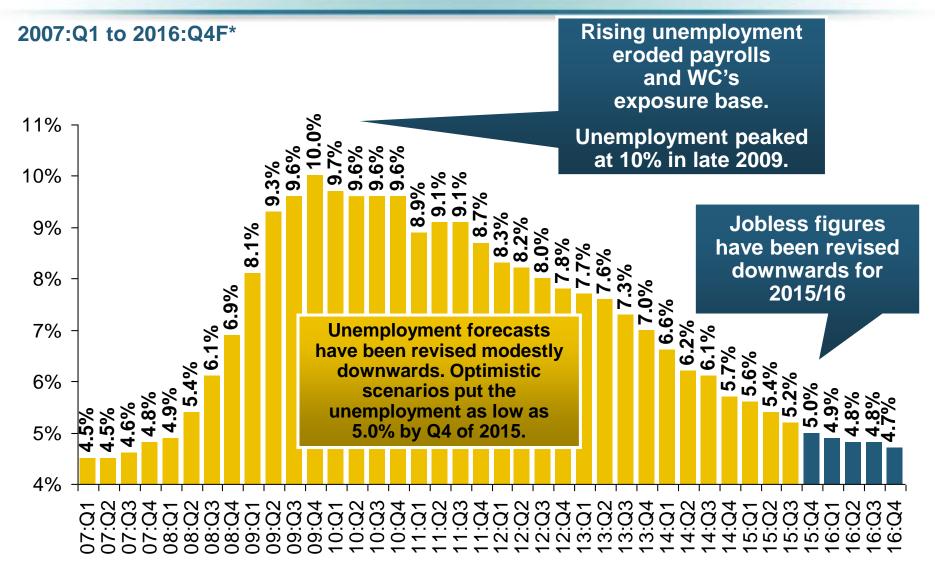


Private Employers Added 13.03 Million Jobs Since Jan. 2010 After Having Shed 5.01 Million Jobs in 2009 and 3.76 Million in 2008 (State and Local Governments Have Shed Hundreds of Thousands of Jobs)

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

# **US Unemployment Rate Forecast**



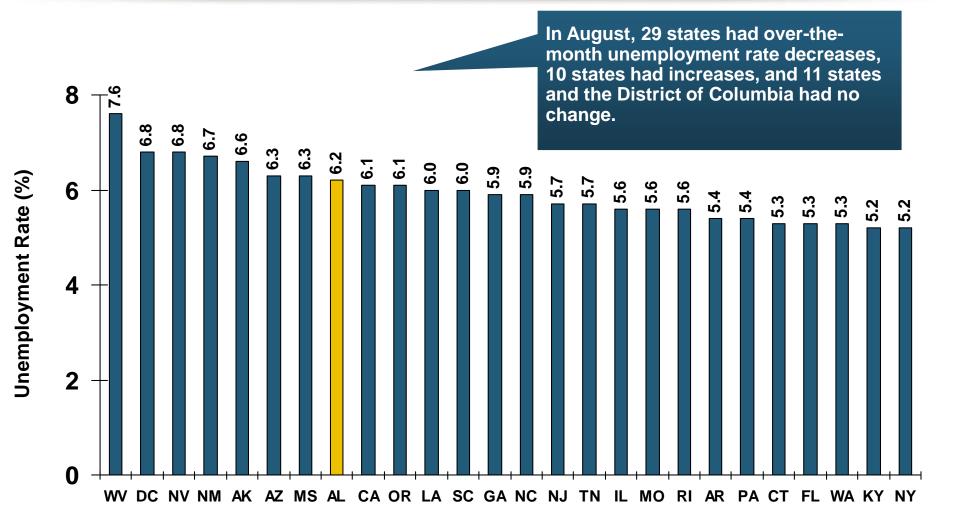


= actual; = forecasts

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (9/15 edition); Insurance Information Institute.

### Unemployment Rates by State, August 2015: Highest 25 States\*



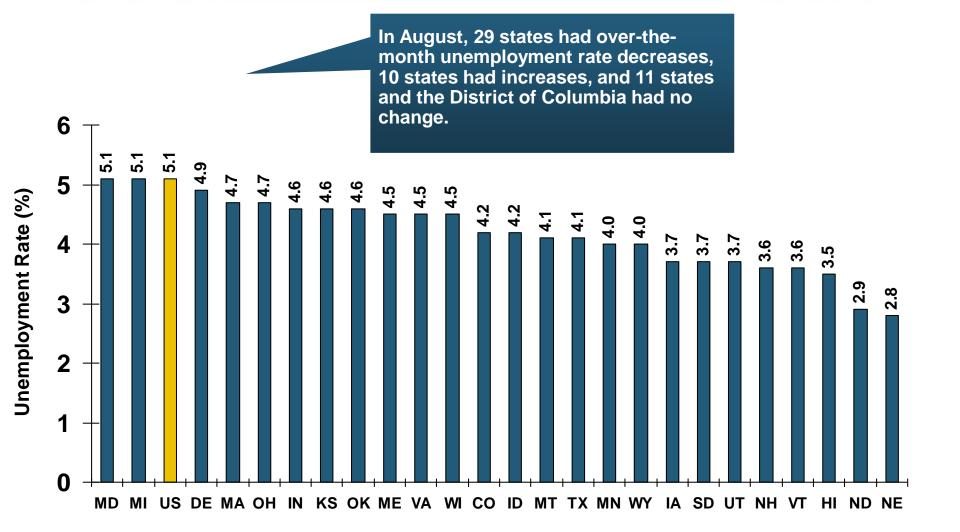


\*Provisional figures for August 2015, seasonally adjusted. Sources: US Bureau of Labor Statistics; Insurance Information Institute.

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### Unemployment Rates by State, August 2015: Lowest 25 States\*





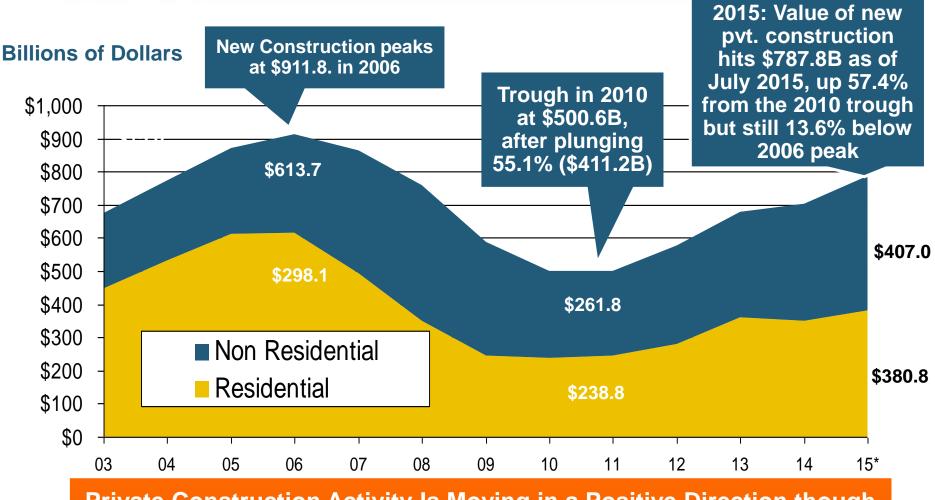
\*Provisional figures for August 2015, seasonally adjusted. Sources: US Bureau of Labor Statistics; Insurance Information Institute.



# CONSTRUCTION INDUSTRY OVERVIEW & OUTLOOK

# The Construction Sector Is Critical to the Economy and the P/C Insurance Industry

# Value of New Private Construction: Residential & Nonresidential, 2003-2015\*



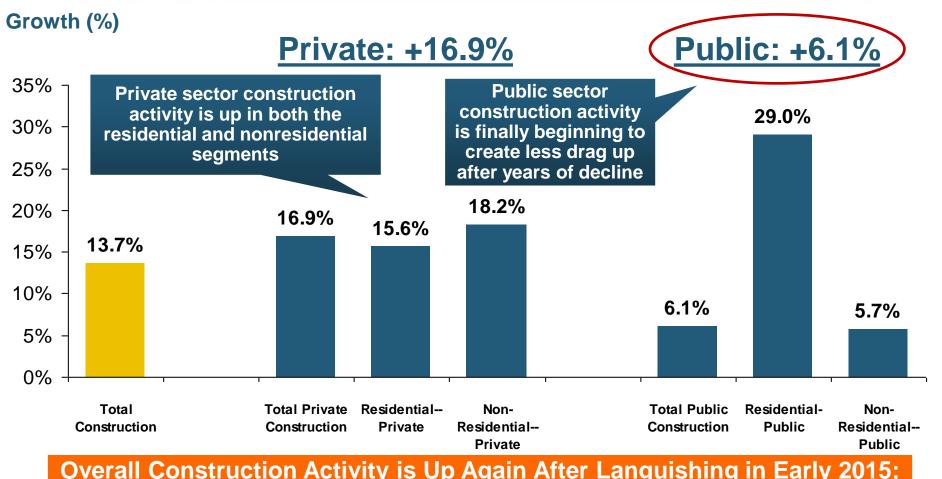
### Private Construction Activity Is Moving in a Positive Direction though Remains Well Below Pre-Crisis Peak; Residential Dominates

\*2015 figure is a seasonally adjusted annual rate as of July.

Sources: US Department of Commerce <a href="http://www.census.gov/construction/c30/c30index.html">http://www.census.gov/construction/c30/c30index.html</a> ; Insurance Information Institute.

## Value of Construction Put in Place, July 2015 vs. July 2014\*



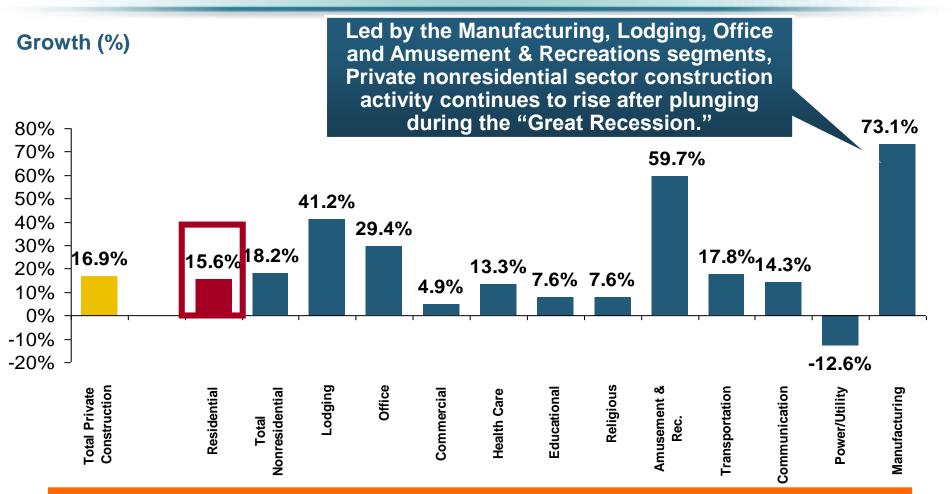


### Overall Construction Activity is Up Again After Languishing in Early 2015; State/Local Sector Government Sector May Be Recovering as Budget Woes Ease in Some Jurisdictions

\*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 2015 vs. July 2014\*

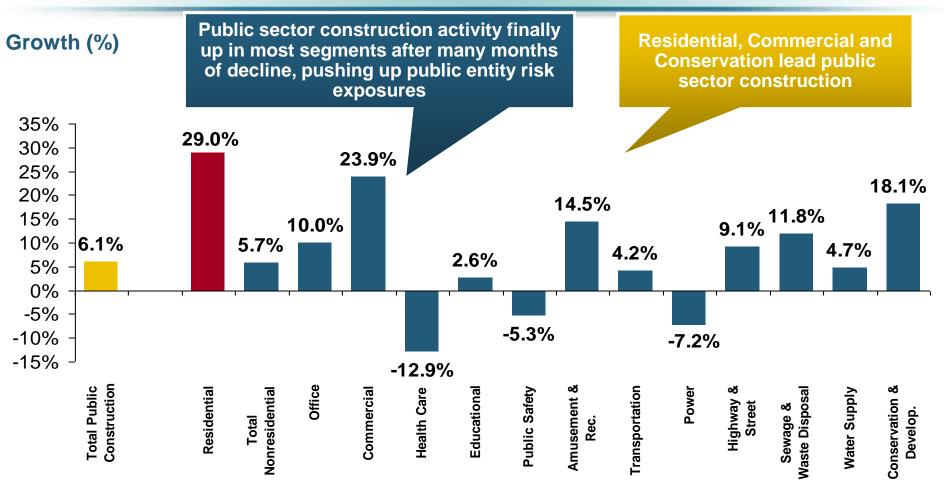


### Private Construction Activity is Up in Most Segments in the Second Half of 2015; Expansion Should Continue

\*seasonally adjusted

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

### Value of Public Construction Put in Place, by Segment, July 2015 vs. July 2014\*



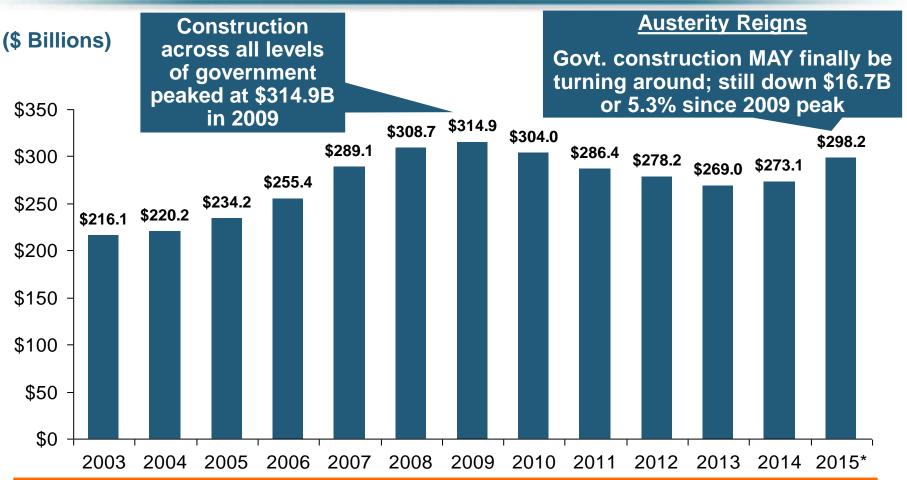
### Public Construction Activity is Beginning to Recover from its Long Contraction which Will Drive Demand in Many Commercial Insurance Lines

\*seasonally adjusted

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

INSURANCE

# Value of New Federal, State and Local Government Construction: 2003-2015\*



### Government Construction Spending Peaked in 2009, Helped by Stimulus Spending, but Contracted As State/Local Governments Grappled with Deficits and Federal Sequestration; Only Now Recovering

\*2015 figure is a seasonally adjusted annual rate as of June; <u>http://www.census.gov/construction/c30/historical\_data.html</u> Sources: US Department of Commerce; Insurance Information Institute.

#### Construction Employment, Jan. 2010—Sept. 2015\*

INSURANCE INFORMATION INSTITUTE

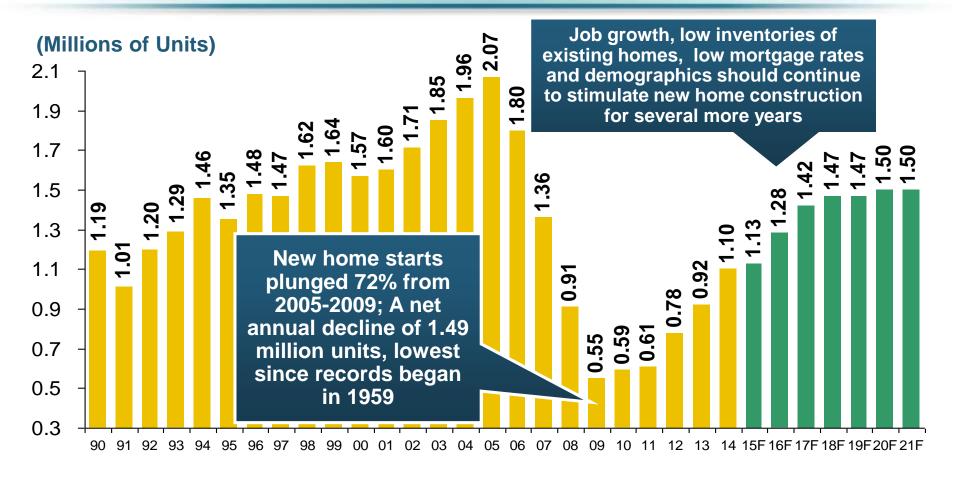


#### Construction and manufacturing employment constitute 1/3 of all WC payroll exposure.

\*Seasonally adjusted.

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

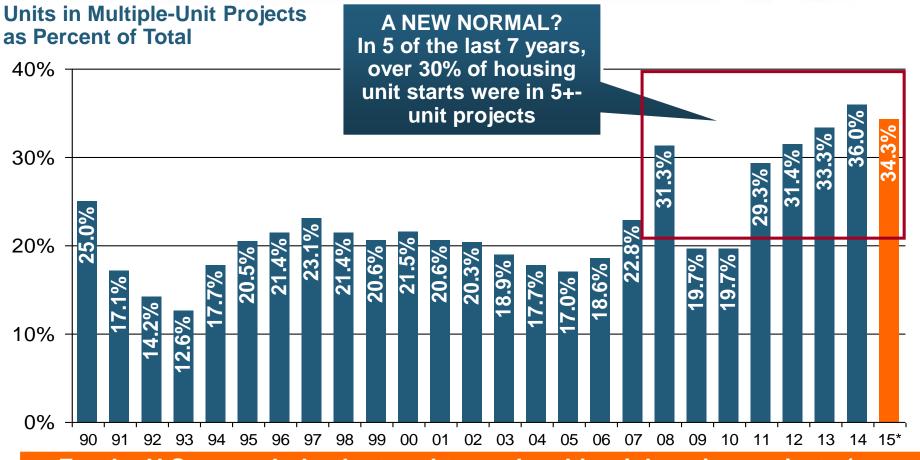
#### New Private Housing Starts, 1990-2021F



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

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (10/15); Insurance Information Institute.

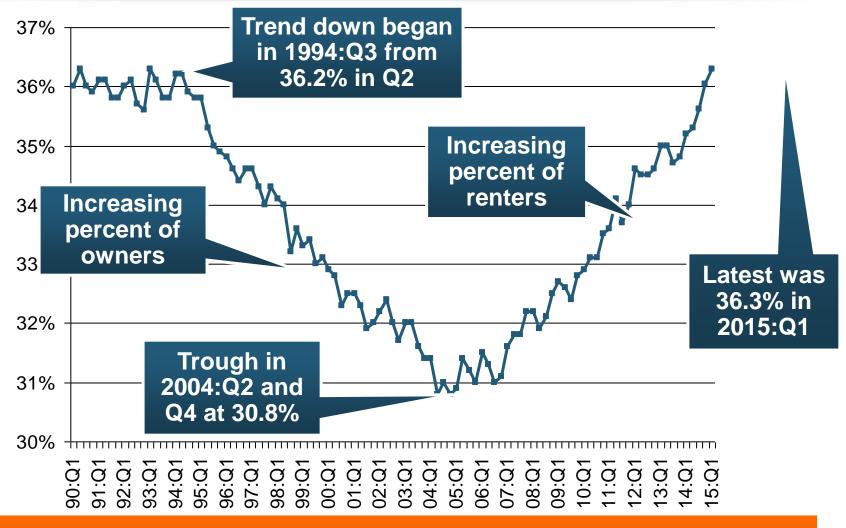
#### U.S.: Pct. Of Private Housing Unit Starts In Multi-Unit Projects, 1990-2015



## For the U.S. as a whole, the trend toward multi-unit housing projects (vs. single-unit homes) is recent. Commercial insurers with Workers Comp, Construction risk exposure, and Surety benefit.

\*January through April 2015; April is preliminary; calculations based on seasonally adjusted at annual rates Sources: U.S. Census Bureau, New Residential Construction in April 2015 and earlier releases; next release June 16, 2015; Insurance Information Institute calculations.

#### Rental-Occupied Housing Units as % of Total Occupied Units, Quarterly, 1990:Q1-2015:Q1



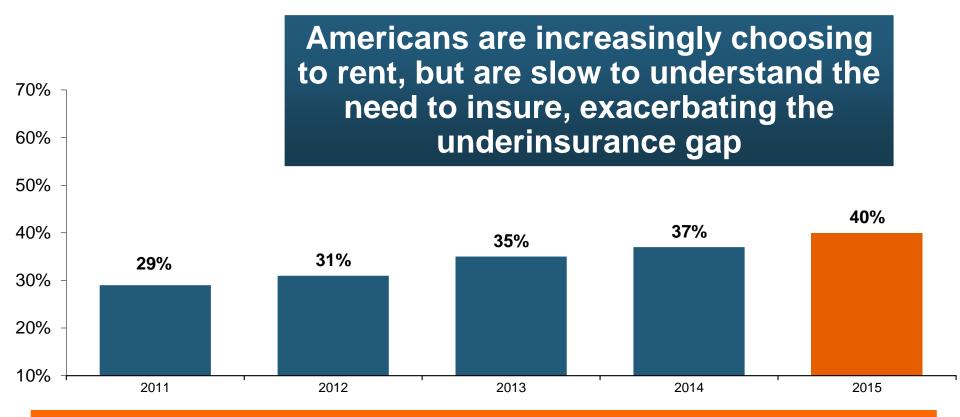
#### Since the Great Recession ended in June 2009, renters occupied 5.7 million more units (+15.6%).

Sources: US Census Bureau, Residential Vacancies & Home Ownership in the First Quarter of 2015 (released April 28, 2015) and earlier issues; Insurance Information Institute. Next Census Bureau report to be released on July 28, 2015.

INSURANCE INFORMATION

#### I.I.I. Poll: Renter's Insurance

#### Q. Do you have renters insurance?<sup>1</sup>



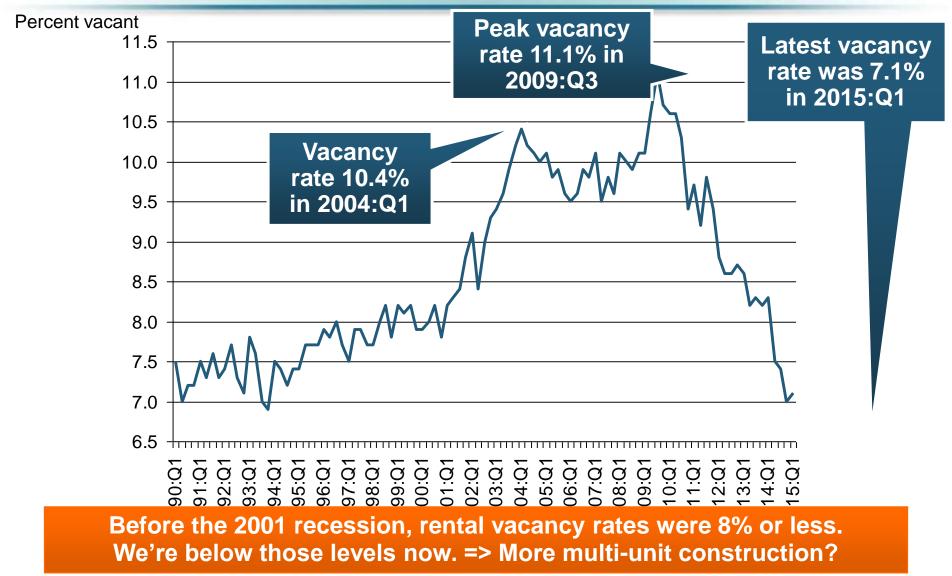
#### The Percentage of Renters Who Have Renters Insurance Has Been Rising Since 2011.

<sup>1</sup>Asked of those who rent their home.

Source: Insurance Information Institute Annual Pulse Survey.

# Rental Vacancy Rates, Quarterly, 1990:Q1-2015:Q1

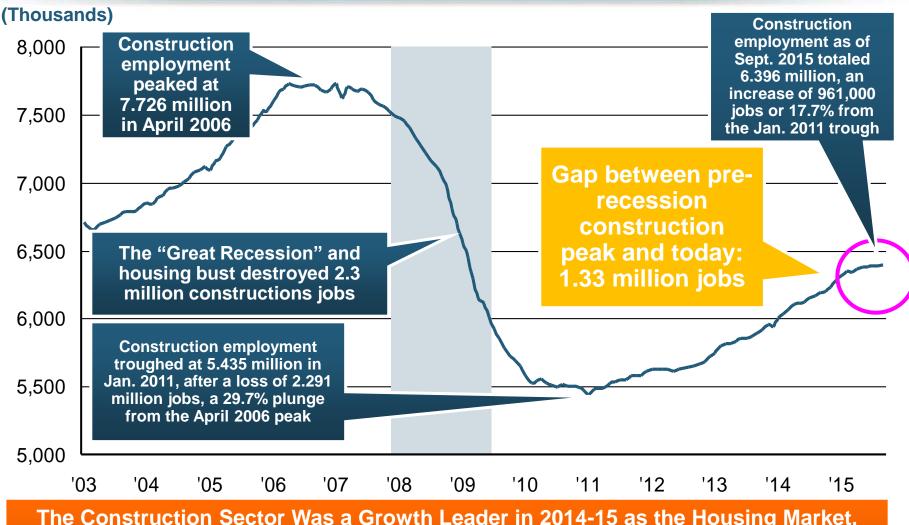




Sources: US Census Bureau, *Residential Vacancies & Home Ownership in the First Quarter of 2015* (released April 28, 2015) and earlier issues; Insurance Information Institute. Next Census Bureau report to be released on July 28, 2015.

#### Construction Employment, Jan. 2003–Sept. 2015





#### The Construction Sector Was a Growth Leader in 2014-15 as the Housing Market, Private Investment and Govt. Spending Recover. WC Insurers Will Benefit.

Note: Recession indicated by gray shaded column.

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

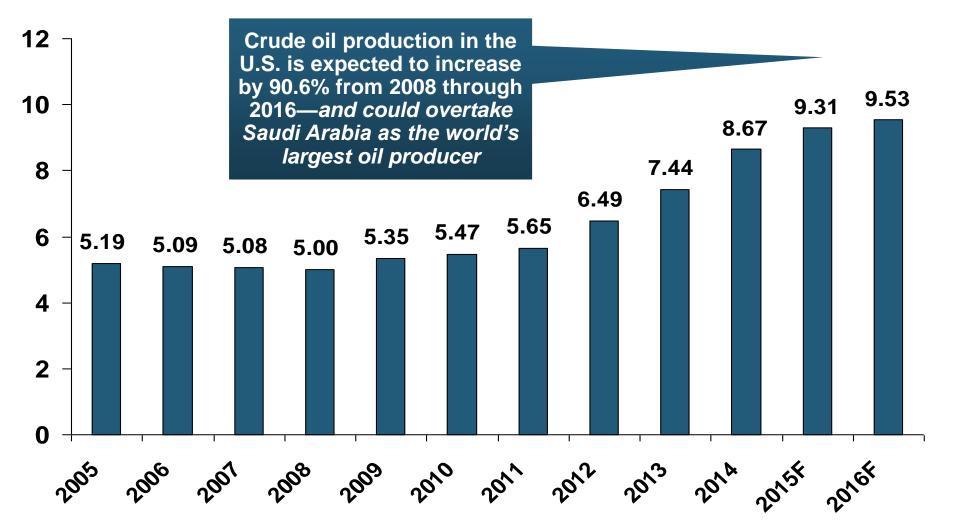


## ENERGY SECTOR: OIL & GAS INDUSTRY FUTURE IS BRIGHT BUT VOLATILE

US Is Becoming an Energy Powerhouse but Fall in Prices Will Have Negative Impact

#### U.S. Crude Oil Production, 2005-2016P

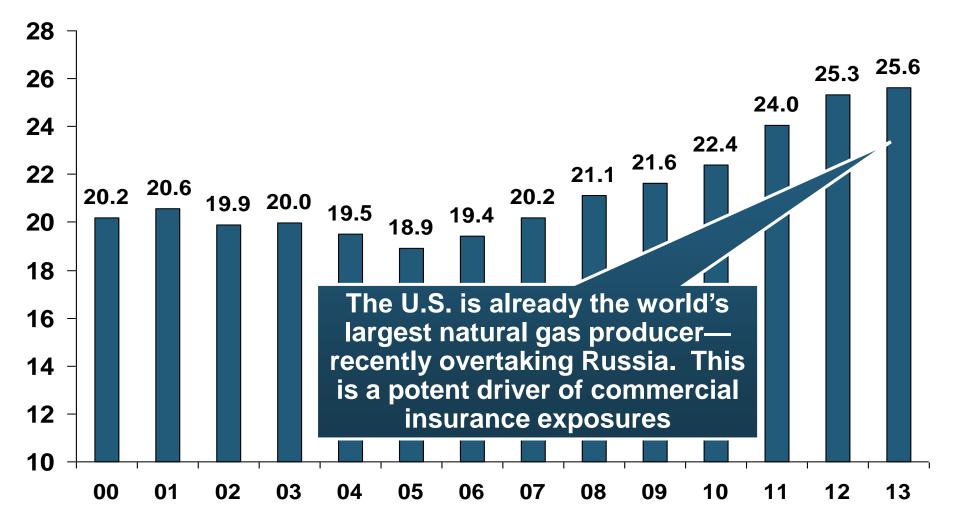
#### **Millions of Barrels per Day**



Source: Energy Information Administration, Short-Term Energy Outlook (January 15, 2015), Insurance Information Institute.

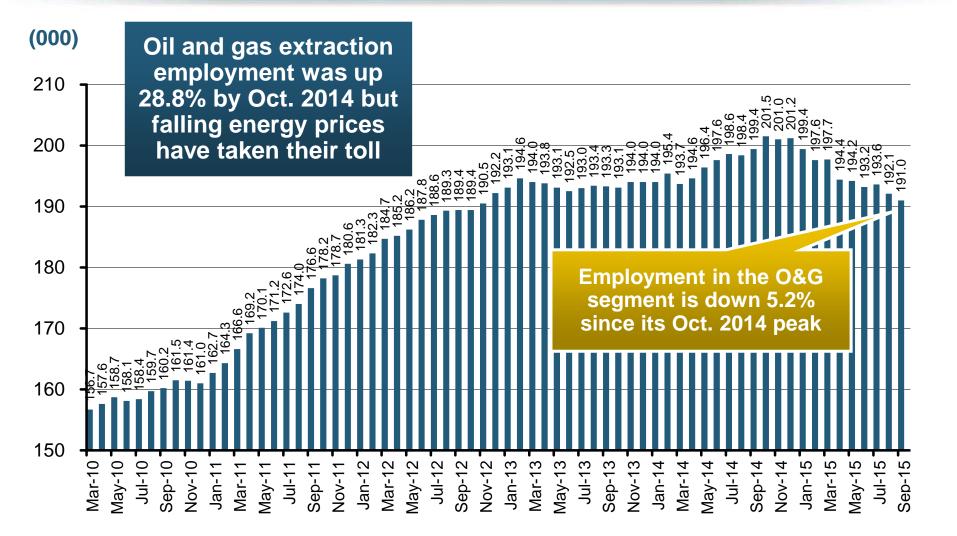
#### U.S. Natural Gas Production, 2000-2013





Source: Energy Information Administration, Short-Term Energy Outlook (April 8, 2014), Insurance Information Institute.

#### Employment in Oil & Gas Extraction, Jan. 2010—Sept. 2015\*



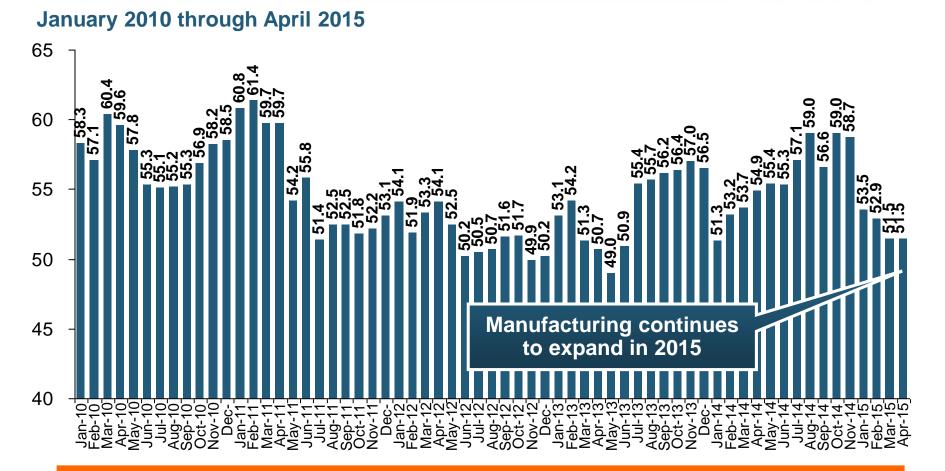
\*Seasonally adjusted Sources: US Bureau of Labor Statistics at <u>http://data.bls.gov</u>; Insurance Information Institute.



## MANUFACTURING SECTOR OVERVIEW & OUTLOOK

The U.S. Was Experiencing a Mini Manufacturing Renaissance but Headwinds from Weak Export Markets and Strong Dollar Hurt

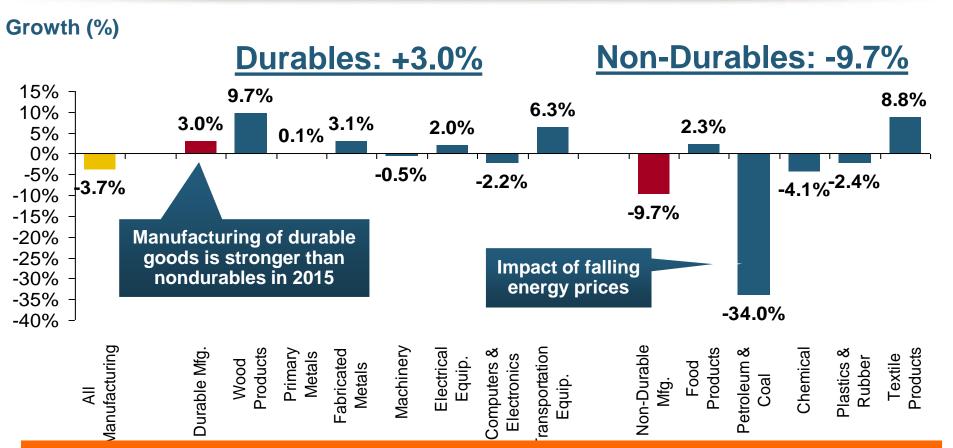
#### ISM Manufacturing Index (Values > 50 Indicate Expansion)



The manufacturing sector expanded for 62 of the 64 months from Jan. 2010 through Apr. 2015. Pace of recovery has been uneven due to economic turbulence in the U.S., Europe and China and the high dollar.

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

# Manufacturing Growth for Selected Sectors, 2015 vs. 2014\*



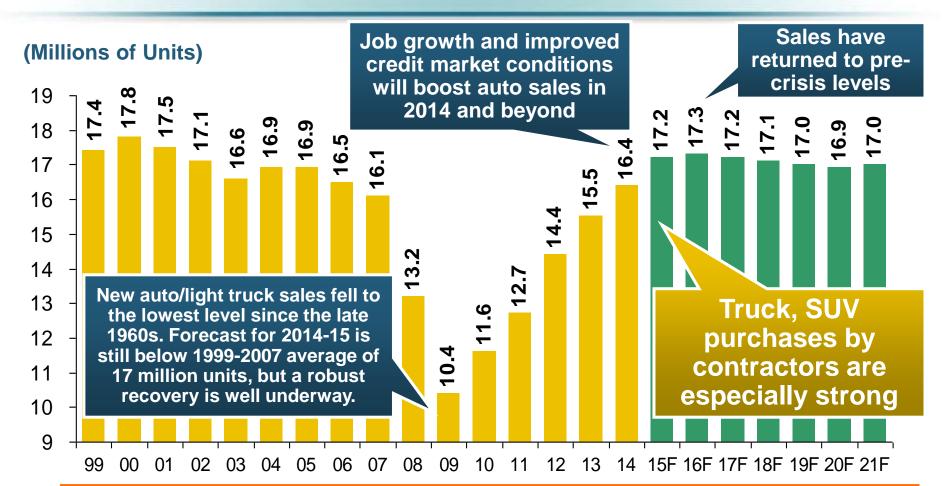
INSURANCE

Manufacturing Is Expanding in Many Sectors But Declining Energy Prices Are Dragging Down Industry Figures. Continued Gortwh 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 February 2015 to the same period in 2014. Source: U.S. Census Bureau, *Full Report on Manufacturers' Shipments, Inventories, and Orders, http://www.census.gov/manufacturing/m3/* 158

#### Auto/Light Truck Sales, 1999-2021F

INSURANCE INFORMATION INSTITUTE

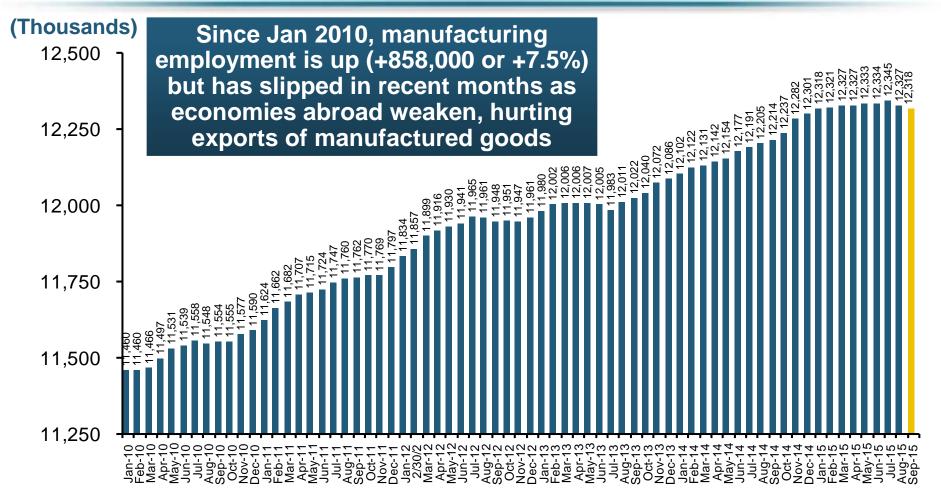


Yearly car/light truck sales will likely continue at current levels, in part replacing cars that were held onto in 2008-12. New vehicles will generate more physical damage insurance coverage but will be more expensive to repair. PP Auto premium might grow by 5% - 6%.

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (10/15); Insurance Information Institute.

#### Manufacturing Employment, Jan. 2010—Sept. 2015\*





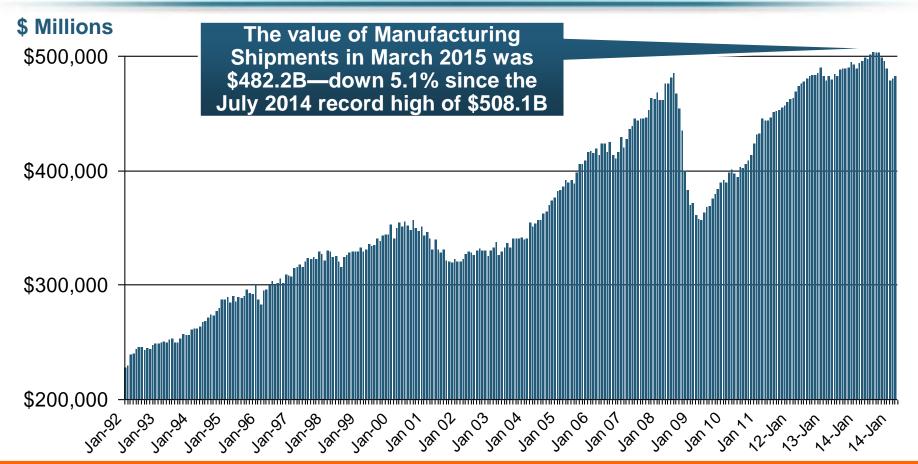
## Manufacturing employment has been a surprising source of strength in the economy. Employment was at a multi-year high until recently.

\*Seasonally adjusted.

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

#### Dollar Value\* of Manufacturers' Shipments Monthly, Jan. 1992—March 2015

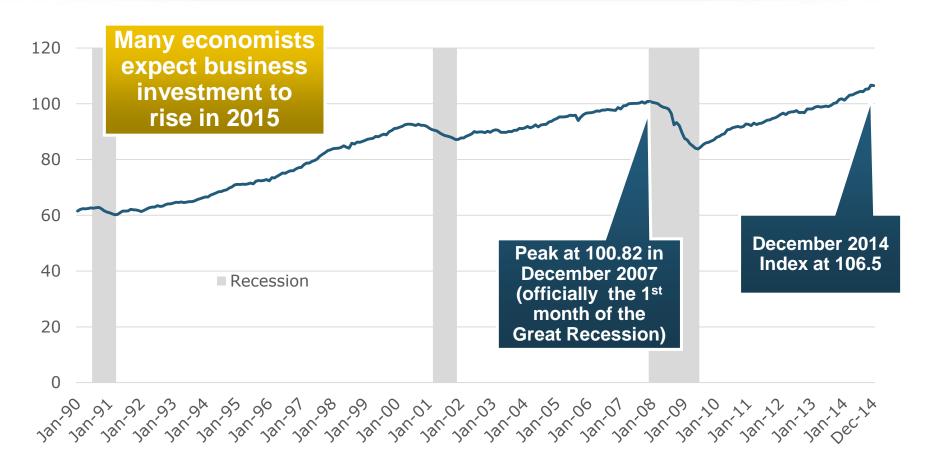




Monthly shipments in March 2015 are similar to pre-crisis (July 2008) peak but has declined in recent months due to the strong US dollar and weakness abroad. Manufacturing is energy-intensive and growth leads to gains in many commercial exposures: WC, Commercial Auto, Marine, Property, and various Liability Coverages.

\* Seasonally adjusted; Data published May 4, 2015. Source: U.S. Census Bureau, *Full Report on Manufacturers' Shipments, Inventories, and Orders, http://www.census.gov/manufacturing/m3/* 161

#### Index of Total Industrial Production:\* A Near Peak as of December 2014

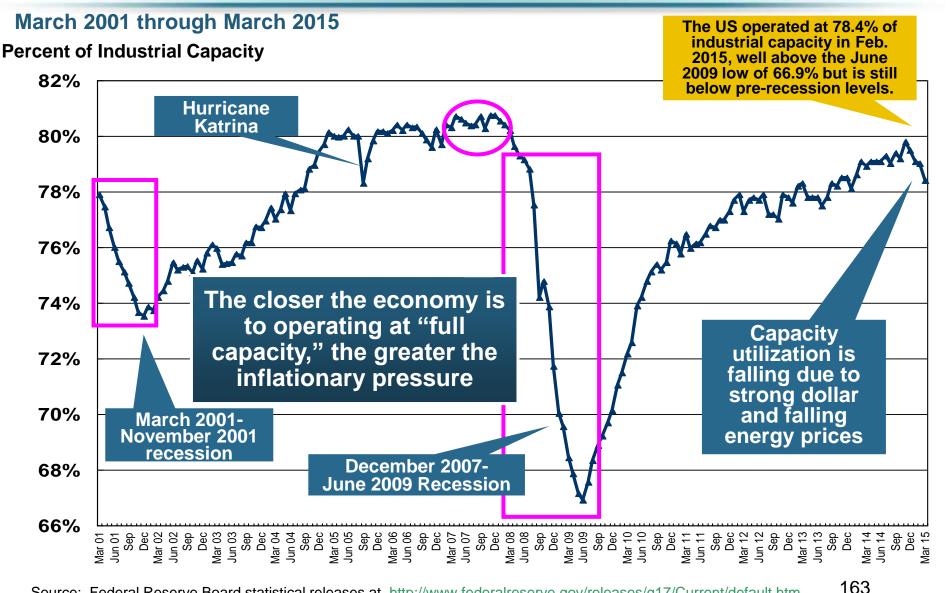


Insurance exposures for industrial production will continue growing in 2015, and commercial insurance premium volume with them. Y-o-Y growth to December 2014 was 4.6%. Both production and premium volume growth for 2015 should exceed this.

\*Monthly, seasonally adjusted, through December 2014 (which is preliminary). Index based on year 2007 = 100 Sources: Federal Reserve Board at <u>http://www.federalreserve.gov/releases/g17/ipdisk/ip\_sa.txt</u>. National Bureau of Economic Research (recession dates); Insurance Information Institute. ISUDANCE

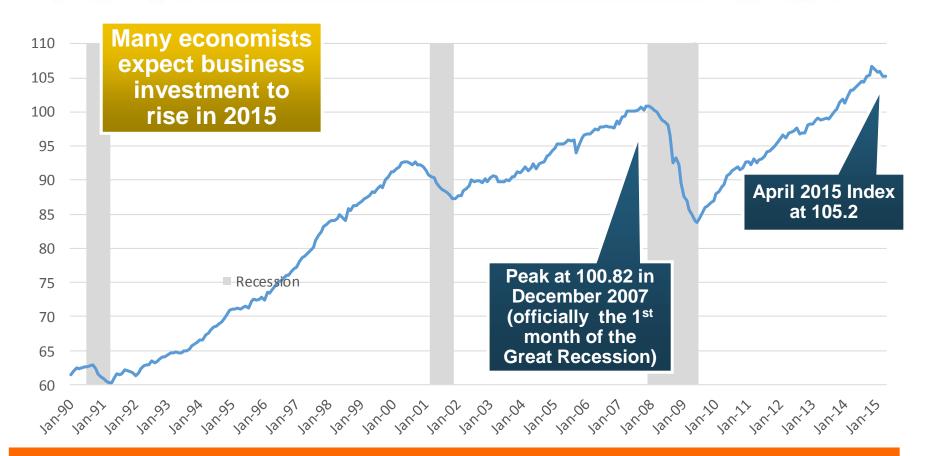
#### **Recovery in Capacity Utilization is a Positive Sign for Commercial Exposures**





Source: Federal Reserve Board statistical releases at http://www.federalreserve.gov/releases/g17/Current/default.htm.

#### Index of Total Industrial Production:\* Strong Dollar Is a Headwind



Insurance exposures for industrial production will continue growing in 2015, and commercial insurance premium volume with them. Y-o-y growth to December 2014 was 4.6%. Both production and premium volume growth for 2015 should exceed this.

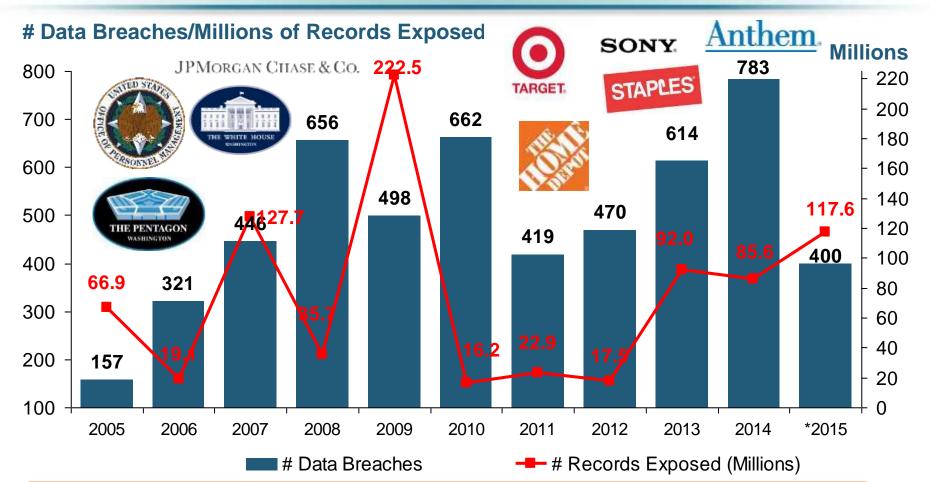
\*Monthly, seasonally adjusted, through March 2015 (which is preliminary). Index based on year 2007 = 100 Sources: Federal Reserve Board at <u>http://www.federalreserve.gov/releases/g17/ipdisk/ip\_sa.txt</u>. National Bureau of Economic Research (recession dates); Insurance Information Institute. ISURANCE



# 9. CYBER RISK & CYBER INSURANCE

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

# Data Breaches 2005-2015, by Number of Breaches and Records Exposed



The total number of data breaches (+27.5%) hit a record high of 783 in 2014, exposing 85.6 million records. Through June 30, this year has seen 117.6 million records exposed in 400 breaches.\*

\*Figures as of June 30, 2015, from the Identity Theft Resource Center, http://www.idtheftcenter.org/images/breach/ITRCBreachReport2015.pdf

#### High Profile Data Breaches, 2014-2015

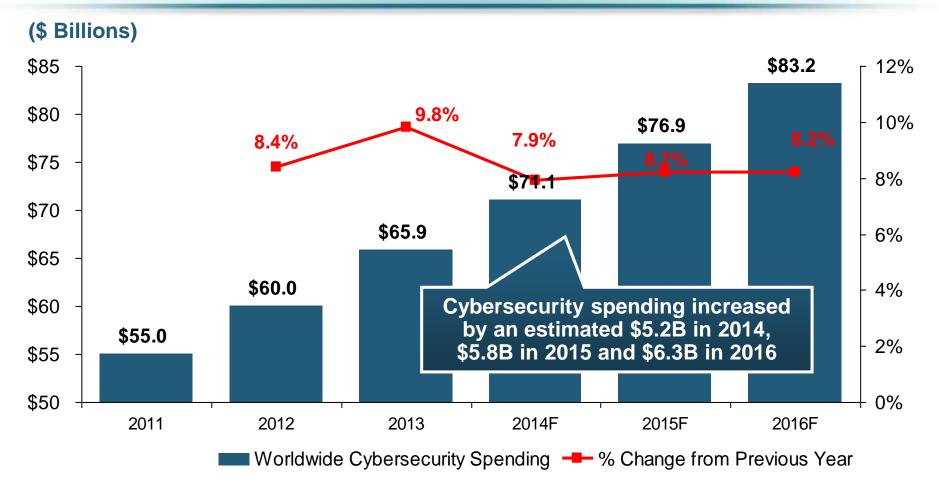
Date	Company	Description of Breach
May 2015	OPM	Hackers broke into U.S. Government Personnel Office stealing personal identifying information of as many as 14 million civilian U.S. government employees.
Mar 2015	Premera Blue Cross	Data breach compromises financial and medical records of 11 million customers.
Feb 2015	Anthem, Inc	Massive data breach after hackers gained access to corporate data base containing personal information of as many as 80 million current and former U.S. customers and employees.
Dec 2014	Sony Pictures Entertainment	Hacker break-in involving theft of unreleased motion pictures, and theft of more than 25 gigabytes of sensitive data on tens of thousands of Sony employees, including social security numbers, medical and salary information.
Nov 2014	Staples	Point-of-sale (POS) malware attack and breach exposing customer data, and resulting in compromise of 1.2 million records.
Sept 2014	Home Depot	Huge data breach exposes 56 million credit and debit cards and 53 million email addresses.
Aug 2014	Community Health Systems	Cyber attack originating in China resulted in data breach, compromising 4.5 million patient records. Hackers broke into company's computer system by exploiting Heartbleed bug.
June/July 2014	JP Morgan Chase	Massive data breach compromised data associated with 76 million household and 7 million small business accounts. Hackers obtained personal identifying nformation.
June 2014	PF Changs	Security breach affected customers at 33 restaurants located in 16 states, with potential credit and debit card data stolen.
May 2014	eBay	Massive data breach exposed records of site's 233 million customers, including names, email addresses, physical addresses, phone numbers and birthdates.
Feb 2014	Michaels Stores	Possible fraudulent activity on some U.S. payment cards used at Michaels stores suggests it may have experienced data security attack, exposing 2.6 million records.
Jan 2014	Snapchat	Security breach compromises phone numbers and usernames for 4.6 million accounts.
Jan 2014	Neiman Marcus	Hacker break-in exposed unknown no. of customer cards, compromising est. 1.1 million records.
Nov/Dec 2013	Target	Malware stored on Target's checkout registers led to theft of data from about 40 million credit and debit card accounts and the personal information of up to 70 million customers.
Sources: Identity Theft Resource Center: Insurance Information Institute (I.I.I.) research.		

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INFORMATION

Sources: Identity Theft Resource Center; Insurance Information Institute (I.I.I.) research.

# Worldwide Cybersecurity Spending, 2011-2016F



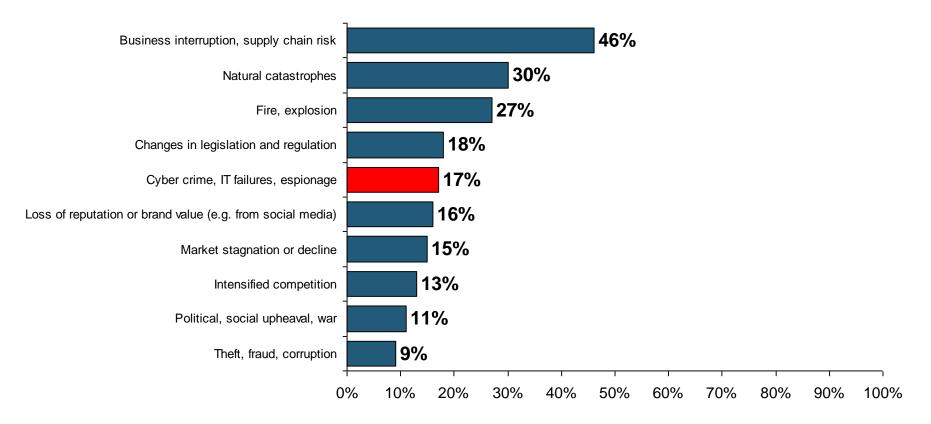
## Cybersecurity Spending Is Rising Sharply, Up by About 8%+ Annually through 2016—a Projected Increase of \$12.1 Billion from 2014 to 2016

168

Source: Gartner Group; Insurance Information Institute; Adapted from Wall Street Journal: "Financial Firms Boost Cybersecurity Funds," Nov. 17, 2014.

#### **Top 10 Global Business Risks for 2015**





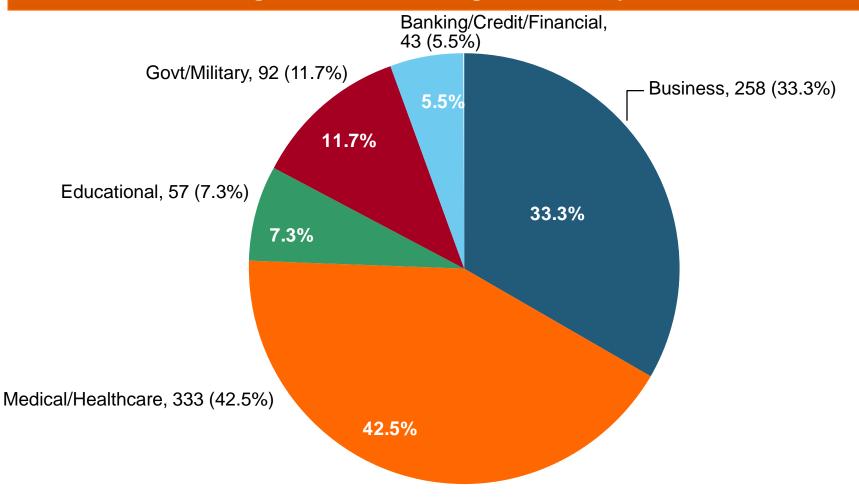
Source: Allianz Risk Barometer on Business Risks 2015

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#### 2014 Data Breaches By Business Category, By Number of Breaches



The majority of the 783 data breaches in 2014 affected business and medical/healthcare organizations, according to the Identity Theft Resource Center.



Source: Identity Theft Resource Center, http://www.idtheftcenter.org/ITRC-Surveys-Studies/2014databreaches.html

#### **Evolving Threats: Cyber Crime and Cyber** Terrorism



#### **State sponsored groups:**

- Foreign government sponsored
- Sophisticated and well-funded

#### **Organized cyber criminals:**

- Traditional organized crime groups
- Loosely organized global hacker crews

#### Hacktivists:

- Politically-motivated hackers
- Increasing capabilities

#### **Insiders:**

- Easy access to sensitive information
- Difficult to detect

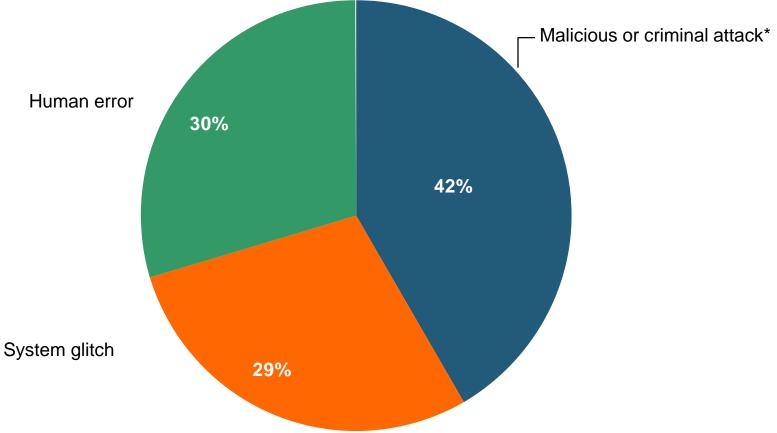
#### **Terrorists:**

Destruction of physical and digital assets

#### Main Causes of Data Breach Globally

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Malicious or criminal attacks are most often the cause of data breach globally. Some 42 percent of incidents concern a malicious or criminal attack, while 30 percent concern a negligent employee or contractor (human factor).

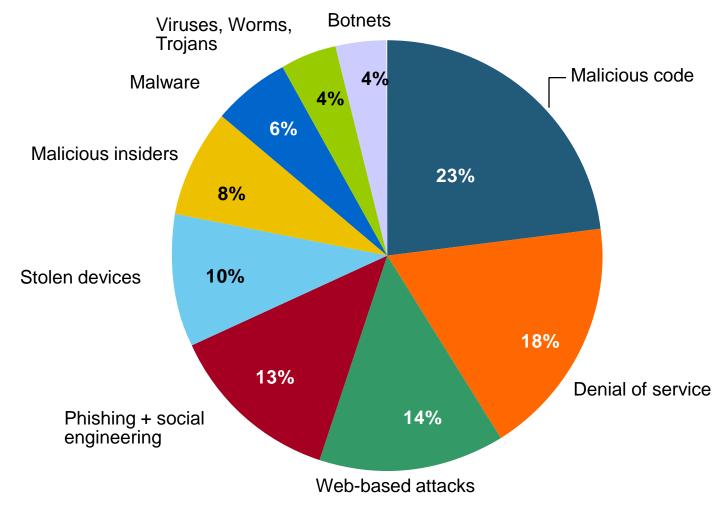


\*The most common types of malicious or criminal attacks include malware infections, criminal insiders, phishing/social engineering and SQL injection.

Source: 2014 Cost of a Data Breach Study: Global Analysis, the Ponemon Institute, sponsored by IBM, May 2014

#### US: Most Costly Types of Cyber Crimes, Fiscal Year 2014

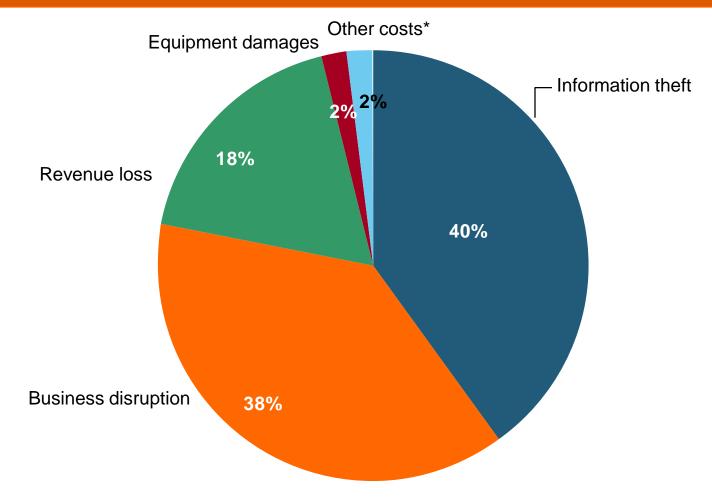
Malicious code, denial of service and web-based attacks account for more than 55 percent of the total annualized cost of cyber crime experienced by 59 U.S. companies.



Source: 2014 Cost of Cyber Crime: United States, Ponemon Institute.

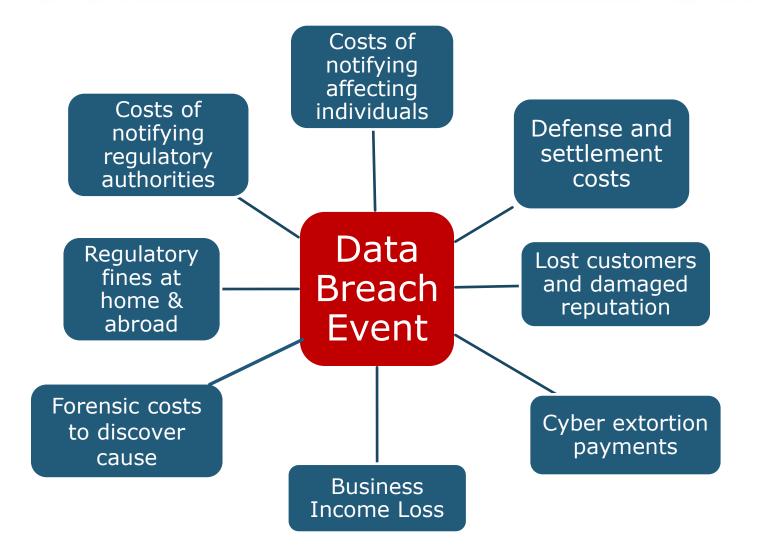
#### US: External Cyber Crime Costs: Fiscal Year 2014

Information theft (40%) and business disruption or lost productivity (38%) account for the majority of external costs due to cyber crime.



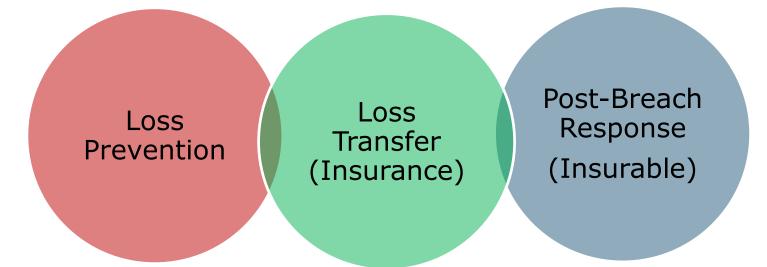
\* Other costs include direct and indirect costs that could not be allocated to a main external cost category Source: 2014 Cost of Cyber Crime: United States, Ponemon Institute.

#### Data/Privacy Breach: Many Potential Costs Can Be Insured



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#### The Three Basic Elements of Cyber Coverage: Prevention, Transfer, Response



Cyber risk management today involves three essential components, each designed to reduce, mitigate or avoid loss. An increasing number of cyber risk products offered by insurers today provide all three.

#### I.I.I.'s New Cyber Risk Report (Oct. 2015): Cyber Risks Threat and Opportunity

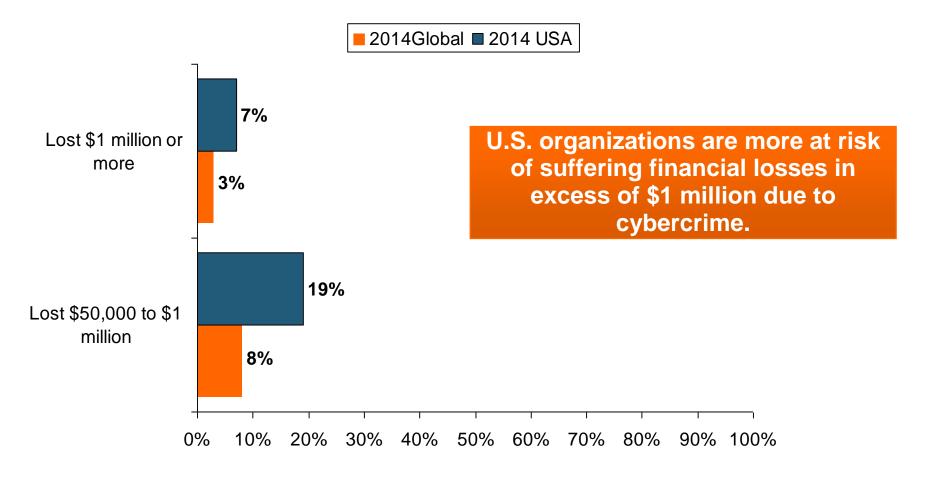




http://www.iii.org/white-paper/cyber-risksthreat-and-opportunities-100715

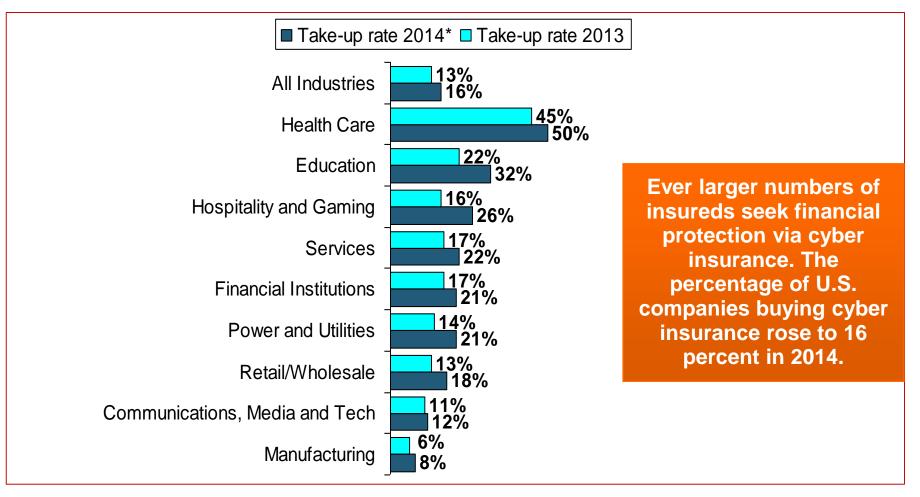
- I.I.I.'s 3<sup>rd</sup> report on cyber risk: Cyber Risk: Threat and Opportunity
- Provides information on cyber threats and insurance market solutions
- Global cyber risk overview
  - Quantification of threats by type and industry
- Cyber security and cost of attacks
- Cyber terrorism
- Cyber liability
- Insurance market for cyber risk

#### **PWC Survey: Cybercrime Costs Greater for U.S. Companies**



Source: 2014 Global Economic Crime Survey, PWC.

#### Marsh: Percentage of U.S. Companies Purchasing Cyber Insurance Increased in 2014



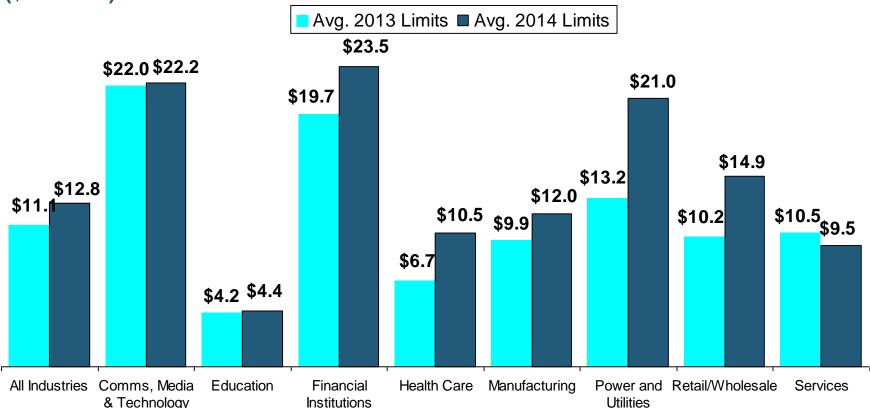
\*Take-up rate refers to the overall percentage of clients that purchased standalone cyber insurance.

Source: Benchmarking Trends: As Cyber Concerns Broaden, Insurance Purchases Rise, Marsh Risk Management Research Briefing, March 2015

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

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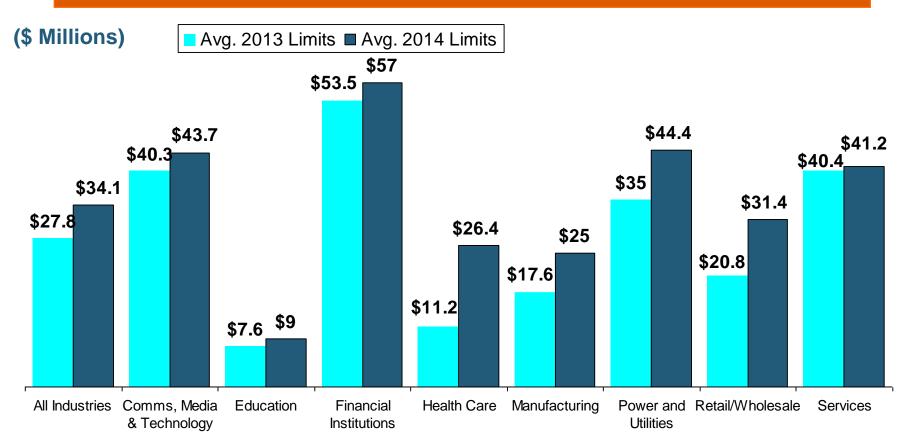
Average limits purchased for cyber risk rose to \$12.8 million for all industries and all company sizes in 2014. Power and utility companies witnessed the sharpest percentage increase in average limits, at 59 percent.



Source: Benchmarking Trends: As Cyber Concerns Broaden, Insurance Purchases Rise, Marsh Risk Management Research Briefing, March 2015

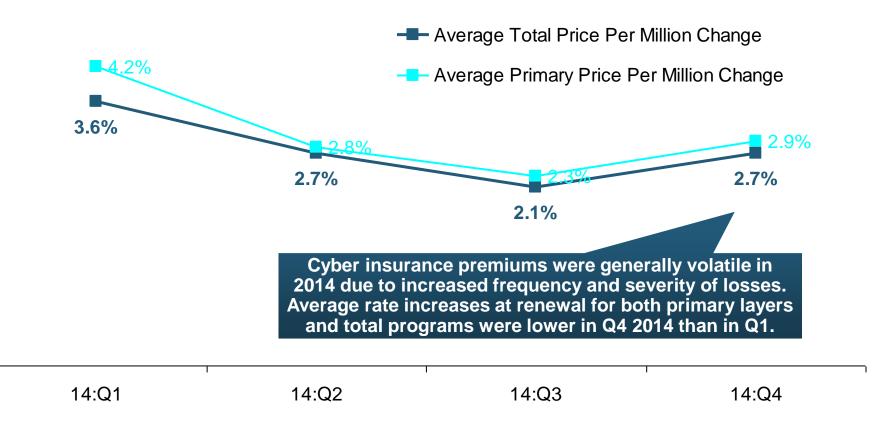
#### Marsh: Total Limits Purchased, By Industry – Cyber Liability, Revenue \$1 Billion+

Among larger companies, average cyber insurance limits purchased increased by 22 percent to \$34.1 million in 2014, from \$27.8 million in 2013.



Source: Benchmarking Trends: As Cyber Concerns Broaden, Insurance Purchases Rise, Marsh Risk Management Research Briefing, March 2015

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



Source: Benchmarking Trends: As Cyber Concerns Broaden, Insurance Purchases Rise, Marsh Risk Management Research Briefing, March 2015



# **10. INDUSTRY DISRUPTORS**

# Technology, Society and the Economy Are All Changing at a Rapid Pace *Will Insurers Keep Pace?*

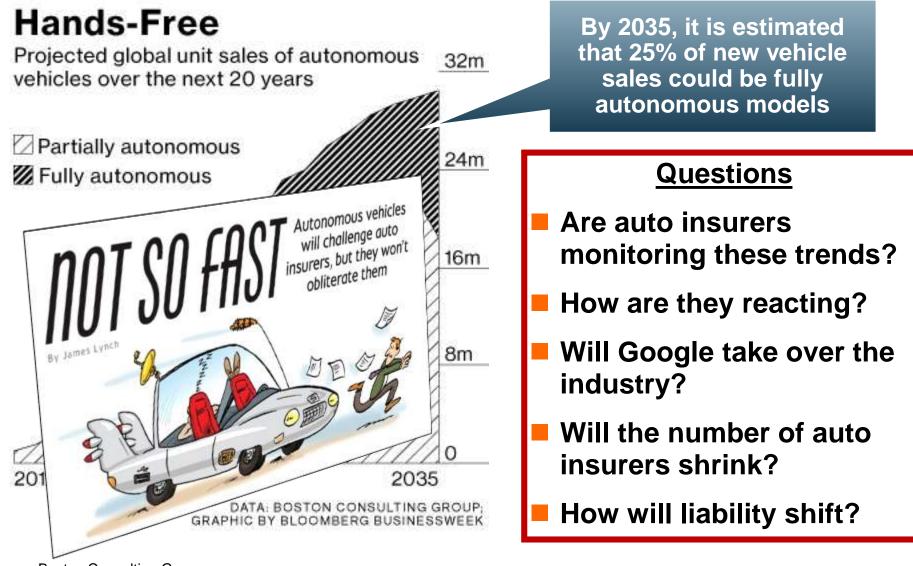




# **Technology and Insurance**

# Rapid Technological Innovations Are Impacting Many Segments of the P/C Insurance Industry

## Media is Obsessed with Driverless Vehicles: Often Predicting the Demise of Auto Insurance



Source: Boston Consulting Group.

### On-Demand/Sharing/Peer-to-Peer Economy Impacts Many Lines of Insurance

- The "On-Demand" Economy is or will impact many segments of the economy important to P/C insurers
  - Auto (personal and commercial)
  - Homeowners/Renters
  - Many Liability Coverages
  - Professional Liability
  - Workers Comp
- Many unanswered insurance questions
- Insurance solutions are increasingly available to fill the many insurance gaps that arise





## A Few Thoughts on the Future of Auto Insurance



- Global auto insurance premiums written total about \$600B
  - ~80% personal, 20% commercial
  - US accounts for more than 1/3 of this total (about \$210B in 2014)
- Innovations in automobile safety will, over time, reduced claim frequency but severities could still rise as repair costs escalate
  - Claim activity clearly not immune to economy
- Frequency declines could lead price declines, aiding profitability
- More cars, not fewer will be on highways in the US, world
  - Exposure (insured car years) grows even as frequency declines
- Timeline for large numbers of mass produced autonomous vehicles on American highways is wildly optimistic
  - Mid-2030s is more likely timeframe; Transition occurring through mid-century
  - Tech media is enamored with anything involving Google, Apple
- Auto insurance will be the largest, most important of all P/C lines for many years to come

# Labor on Demand: Huge Implications for the US Economy, Workers & Insurers



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## **TNC Ridesharing Arrangements:** Insurance Applicability



Phase	TNC Coverage
<ol> <li>Driver logged into TNC App but not "matched" with a passenger</li> </ol>	Contingent liability coverage IF personal auto coverage declined/not available (\$50/100/25)*
<ol> <li>A "match" is made but passenger is not in the driver's car</li> </ol>	Primary liability, UM/UIM coverage at a higher limit (\$1M)* Contingent comp/collision coverage
3. A passenger is in the driver's car	Same as Phase 2

The concern was that TNCs were seeking to offload risk on to personal auto insurers. An increasing number of personal auto insurers have developed solutions to ensure that coverage gaps are minimized

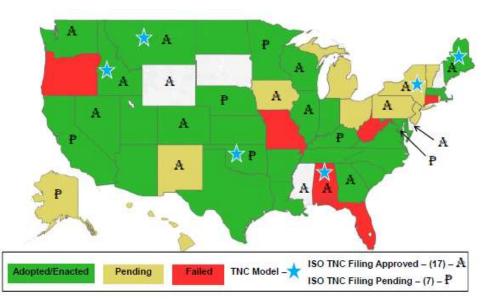
## **Ridesharing Regulation/Legislation** and Status of ISO Filings as of 9/30/15

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#### Status Ride Sharing Legislation/Regulation



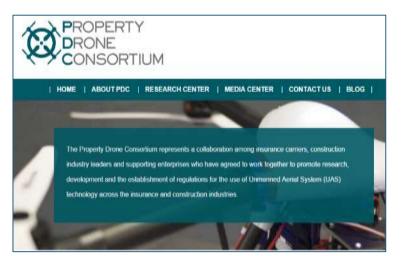
#### **Status of ISO Filings**



## Send in the Drones: Potential Rapid Adoption in Industry; Media Loves It







- Drones or Unmanned Aerial Vehicle (UAV) technology is seeing rapid adoption rate in many industries, including insurance
- ~700,000 drones in US by year-end
- FAA granting Section 333 exemptions for commercial use and testing of UAS
- FAA will require most drones to be registered by year-end 2015.
- At least 5 insurers have received permission to test
- Wide variety of applications: claims, preevent property inspections...
- Insurers partnering with construction industry to guide R&D and regulation of UAV use via *Property Drone Consortium*: www.propertydrone.org

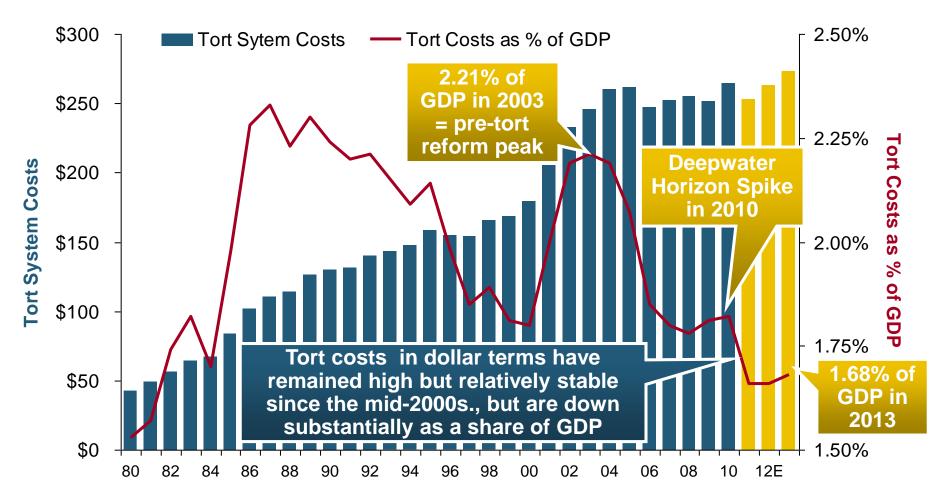


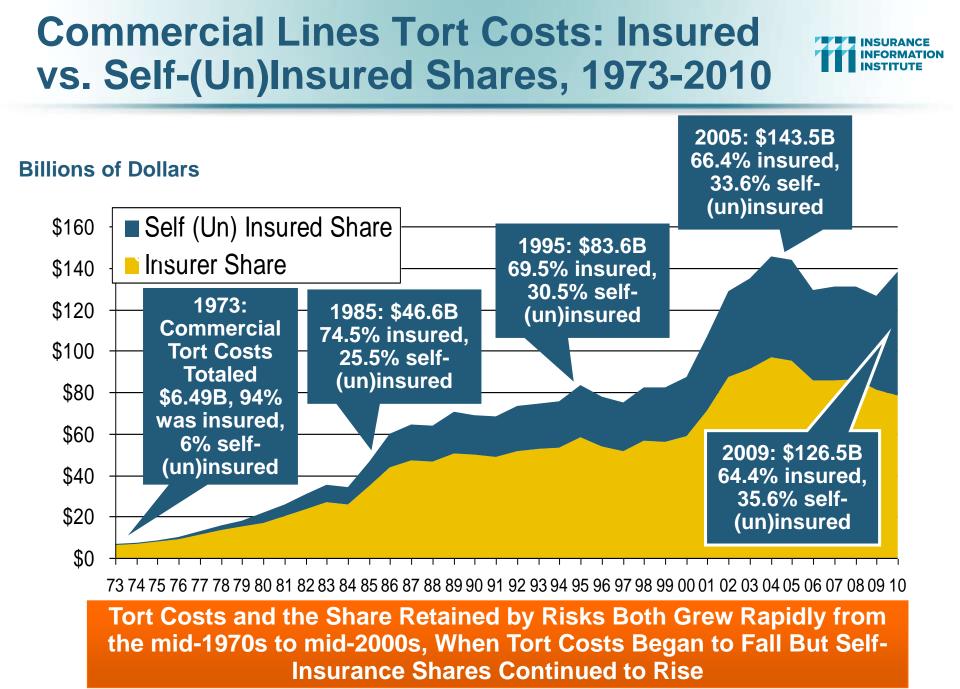
# 11. Shifting Legal Liability & Tort Environment

# Will the Tort Pendulum Swing Against Insurers?

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



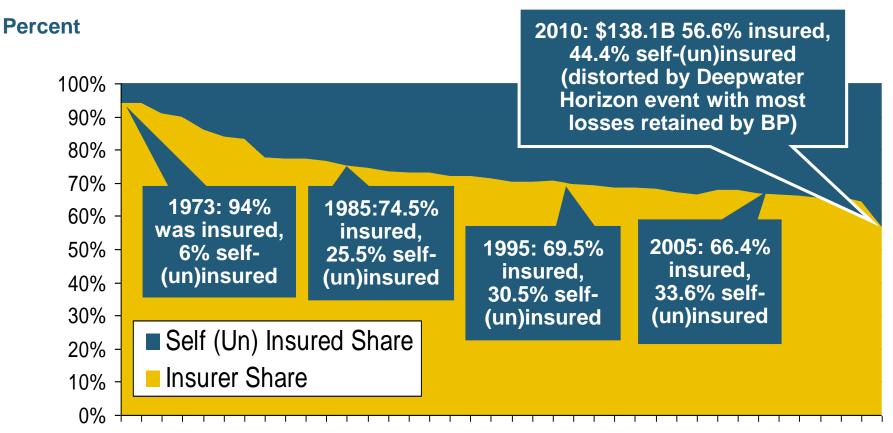




Sources: Towers Watson, 2011 Update on US Tort Cost Trends, III Calculations based on data from Appendix 4.

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





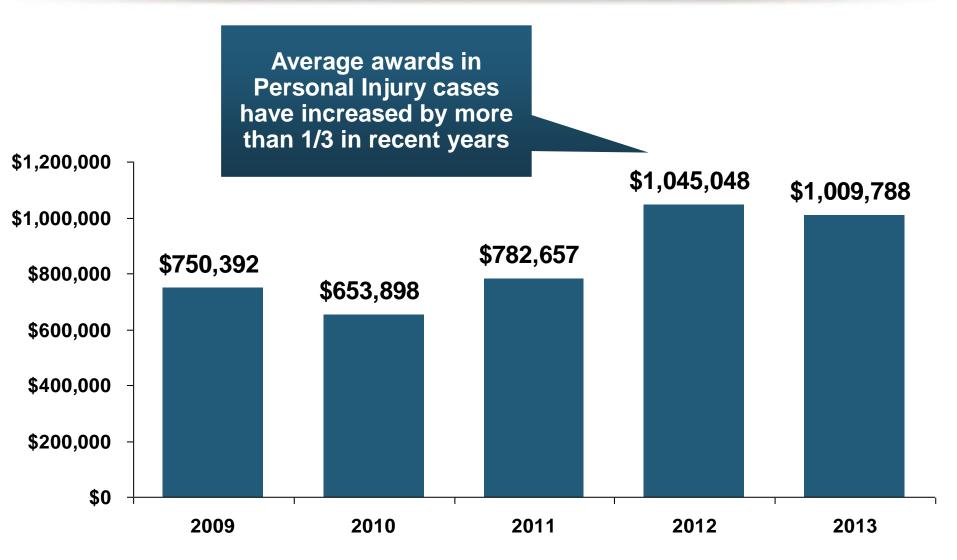
73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10

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.

### Average Personal Injury Jury Award, 2009 – 2013

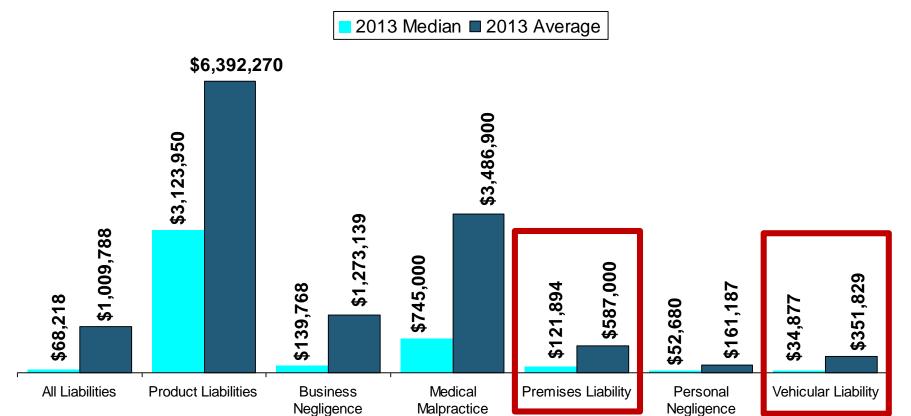




Source: Current Award Trends in Personal Injury, 54th Edition; Insurance Information Institute.

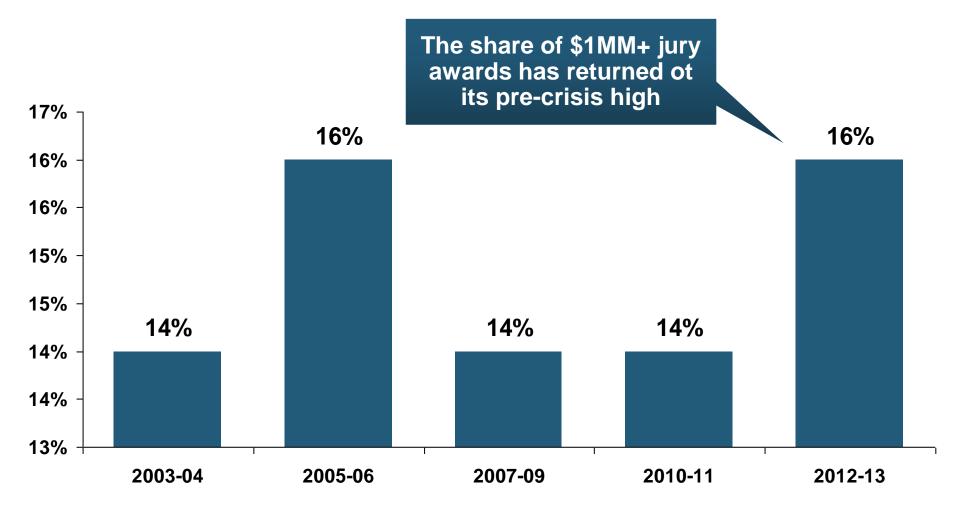
## Median and Average Personal Injury Jury Award by Type of Liability, 2013

Porducts Liability and Medical Malpractice cases tend to have among the highest jury awards



Source: Current Award Trends in Personal Injury, 54th Edition; Insurance Information Institute.

### Percent of Personal Injury Jury Awards Over \$1 Million, 2003 – 2013\*

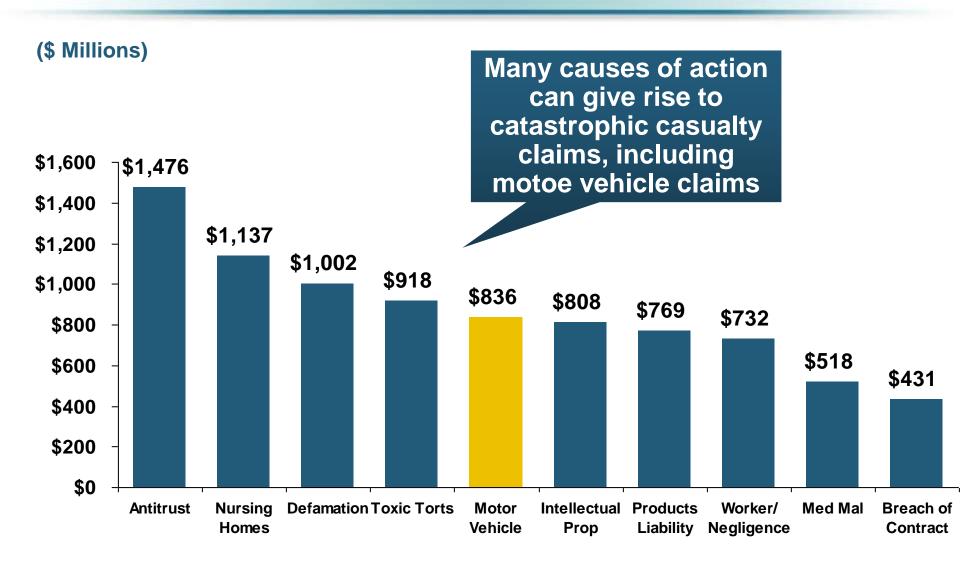


\*Latest available.

Source: Current Award Trends in Personal Injury, 53rd and 54th Editions; Insurance Information Institute.

ISURANCE

## Dollar Value of Top 100 Verdicts in 2013 by Cause of Action, 2013



Source: VerdictSearch as cited in *Reevaluating Excess Casualty Protection as Liability Losses Increase*, Marsh Risk Management Research Briefing, Oct. 2014.

### **Business Leaders Ranking of Liability Systems in 2015**



#### **Worst States Best States** New in 2015 41. Arkansas 1. Delaware **Newly Notorious** Vermont **New Hampshire** 42. Missouri 2. Vermont North Carolina Arkansas South Dakota Missouri 43. Mississippi 3. Nebraska 44. Florida lowa 4. **Drop-offs Rising Above** 45. New Mexico 5. New Hampshire Oklahoma Minnesota 6. Idaho 46. Alabama Kansas Montana 7. North Carolina Virginia 47. California North Dakota 8. Wyoming Illinois 48.

Louisiana

West Virginia

49.

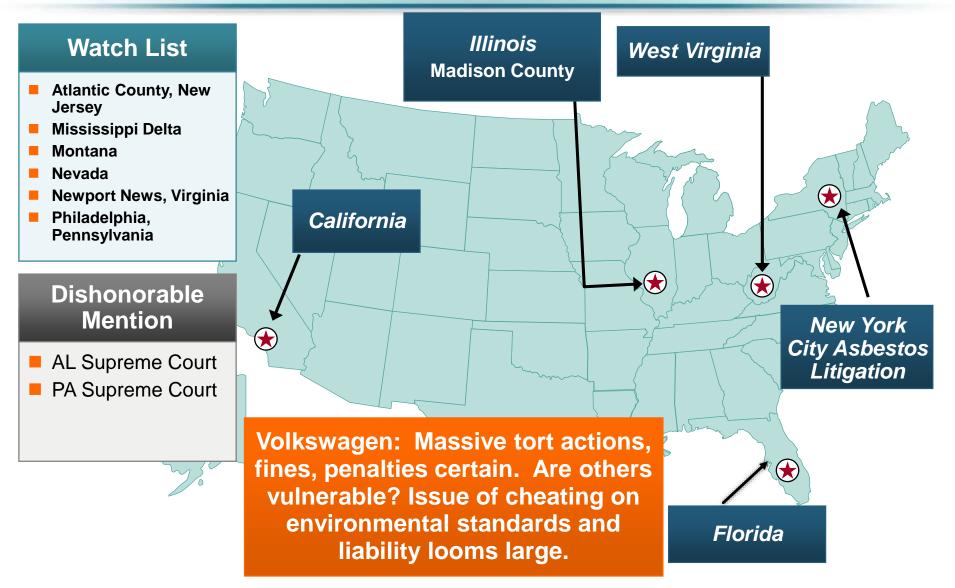
50.

- 9. South Dakota
- 10. Utah

Source: US Chamber of Commerce 2015 State Liability Systems Ranking Study; Insurance Info. Institute.

# The Nation's Judicial "Hellholes": 2014/2015

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Source: American Tort Reform Association; Insurance Information Institute



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

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