



# Florida Property & Casualty Insurance Market Update *Trends, Challenges & Opportunities*

Florida Chamber of Commerce Insurance Summit  
Orlando, FL  
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***Download at [www.iii.org/presentations](http://www.iii.org/presentations)***

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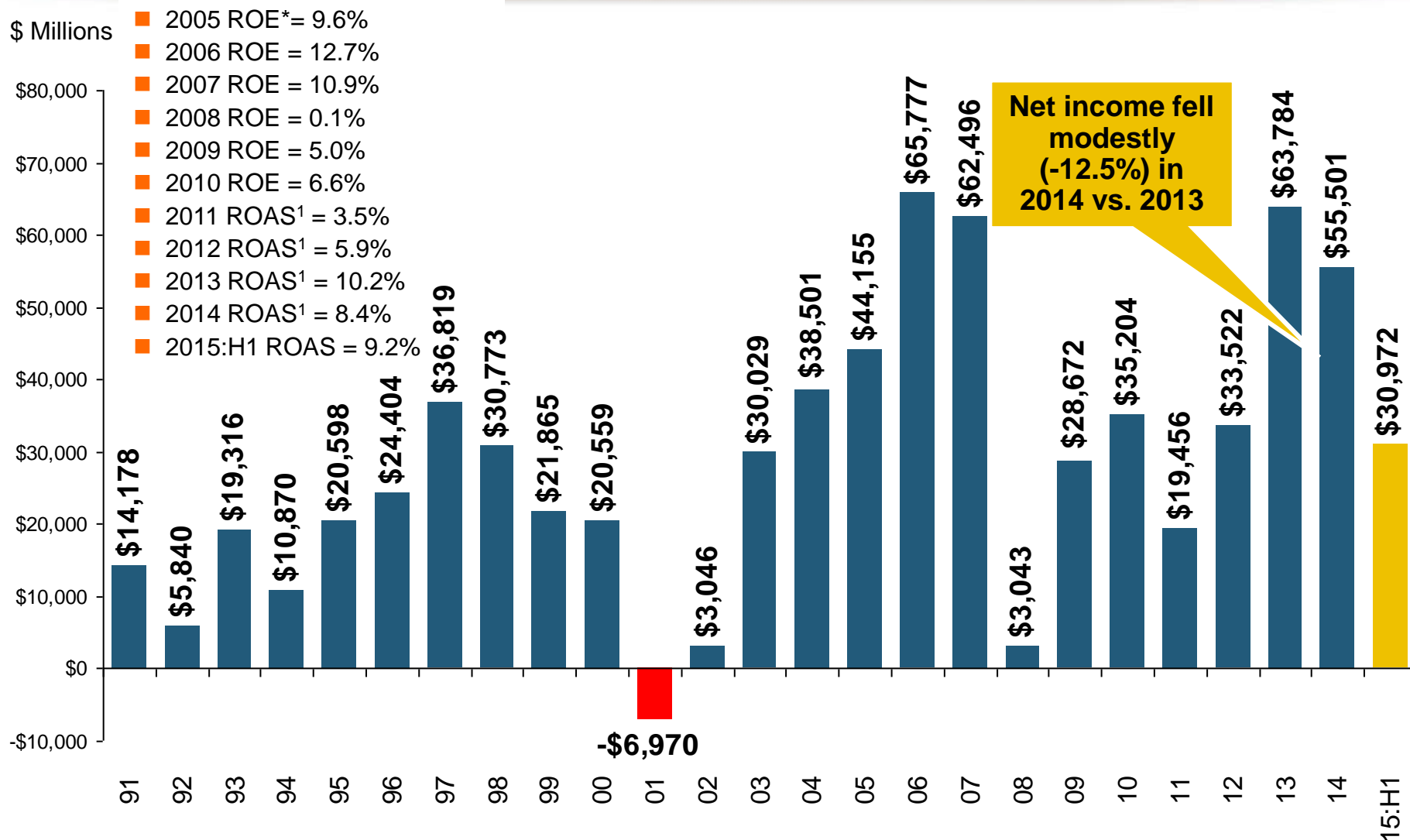


# Insurance Industry Financial Performance

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



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

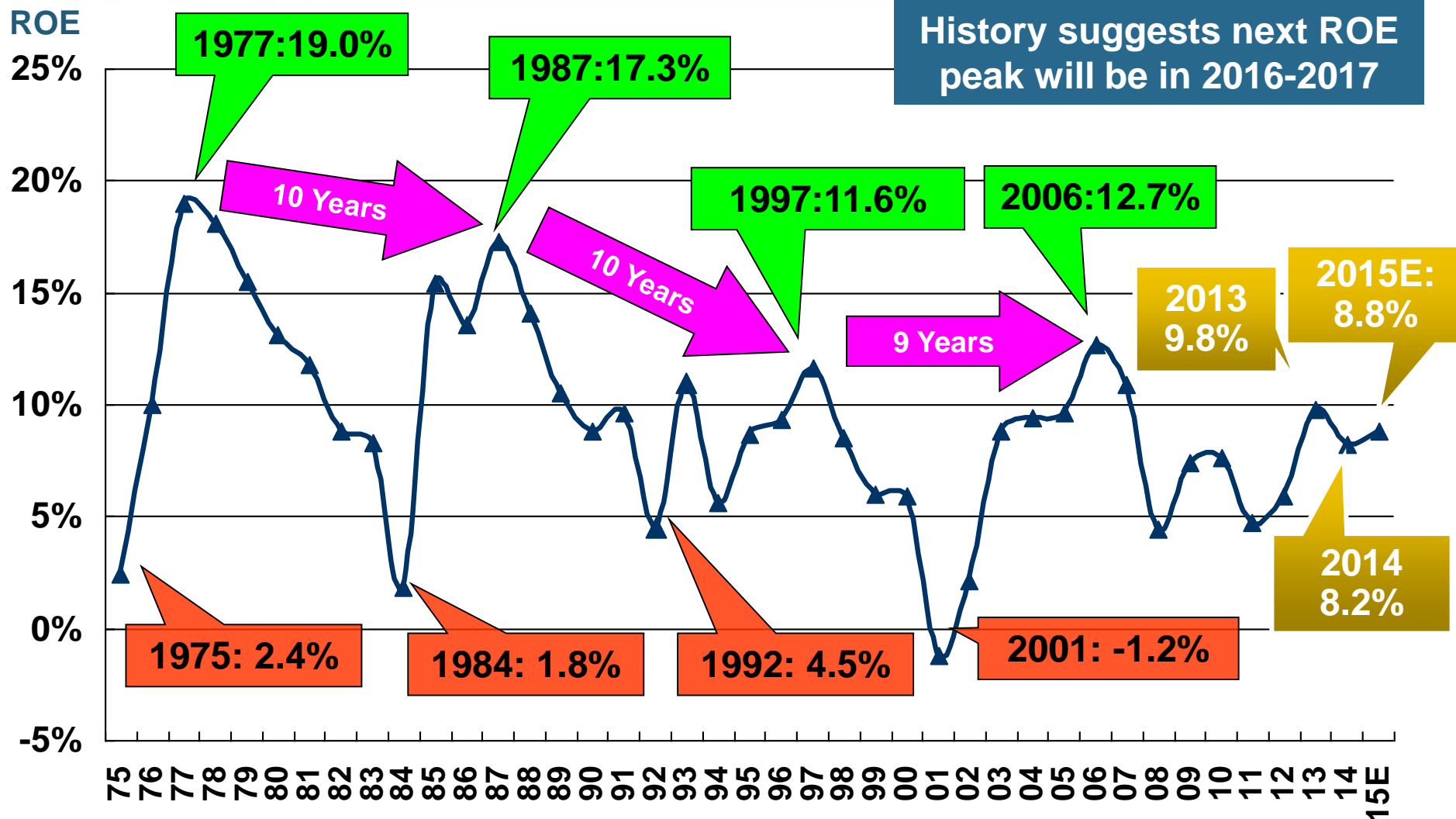


\*ROE figures are GAAP; <sup>1</sup>Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 8.2% ROAS in 2014, 9.8% ROAS in 2013, 6.2% ROAS in 2012, 4.7% ROAS for 2011, 7.6% for 2010 and 7.4% for 2009.

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



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

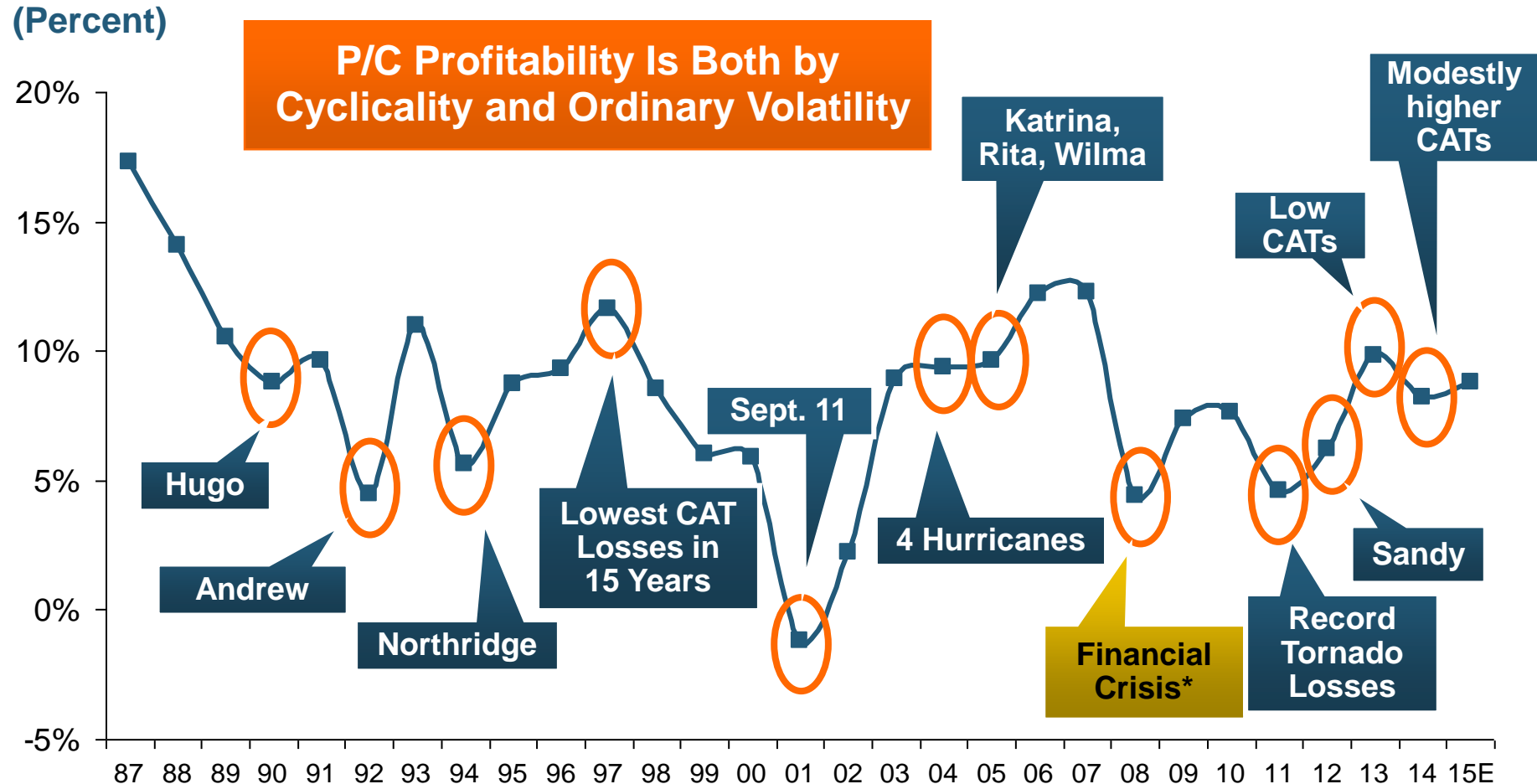


\*Profitability = P/C insurer ROEs. 2011-14 figures are estimates based on ROAS data. Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers.

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



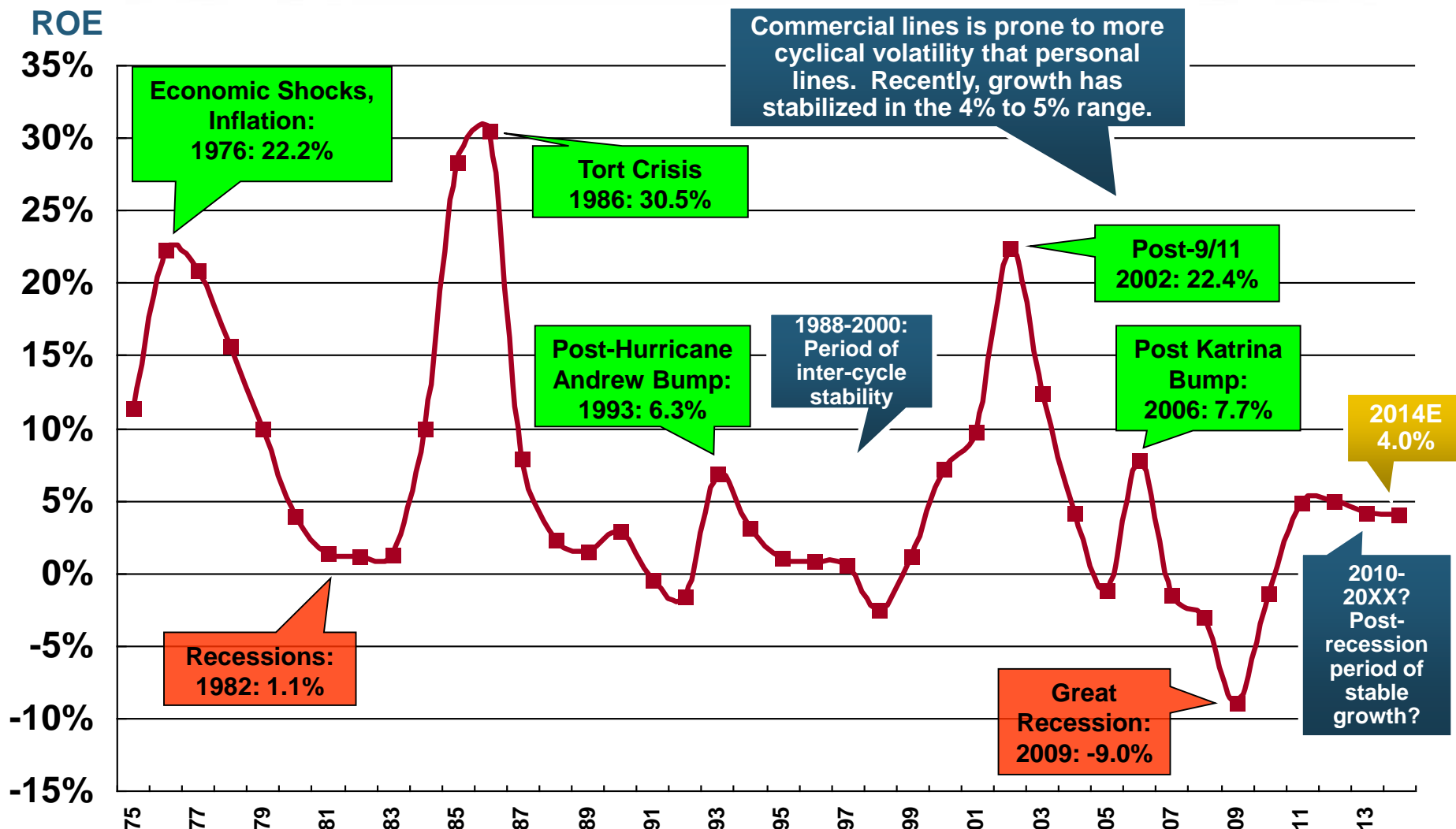
# ROE: Property/Casualty Insurance by Major Event, 1987–2015E



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



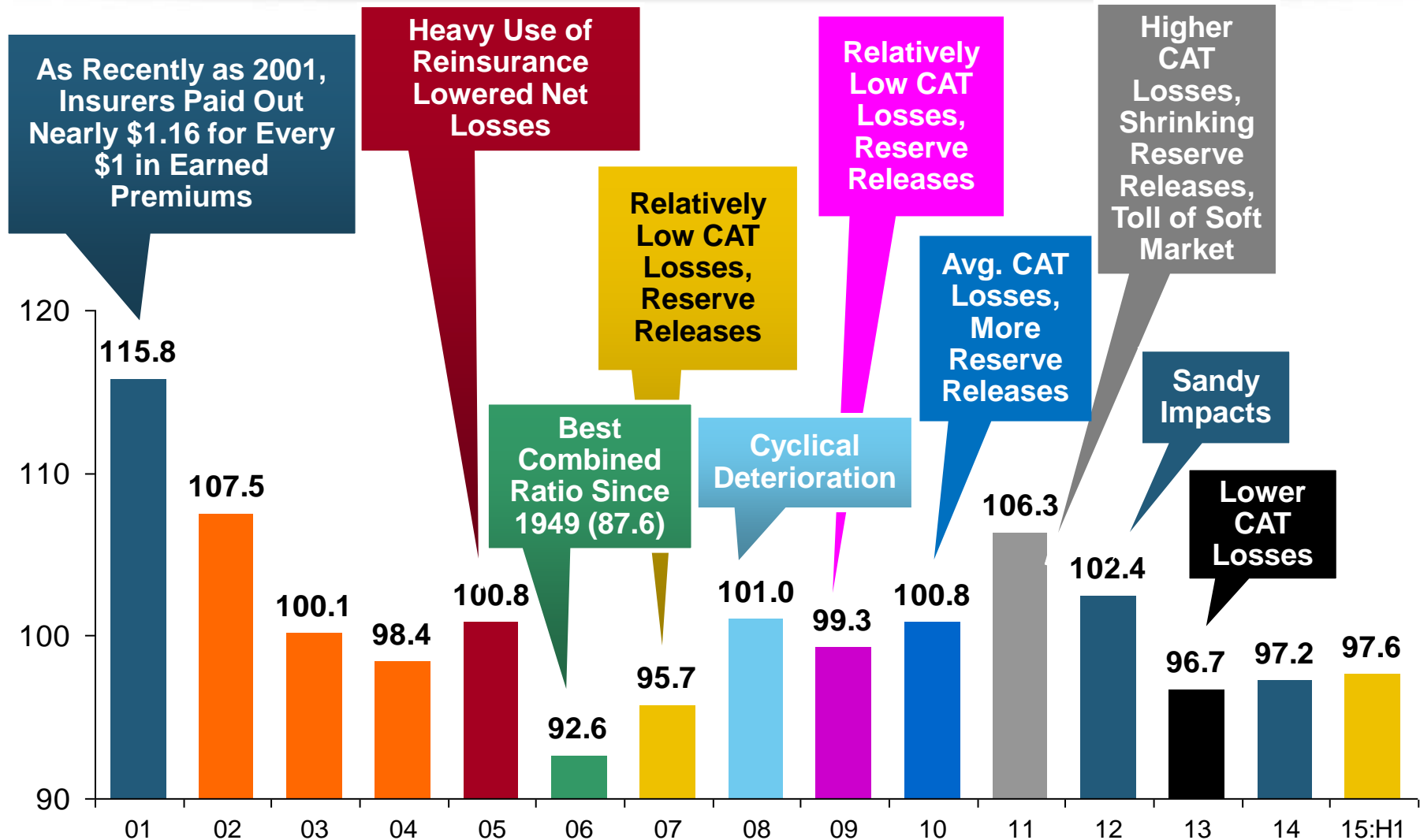
# Commercial Lines NPW Premium Growth: 1975 – 2014E



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.

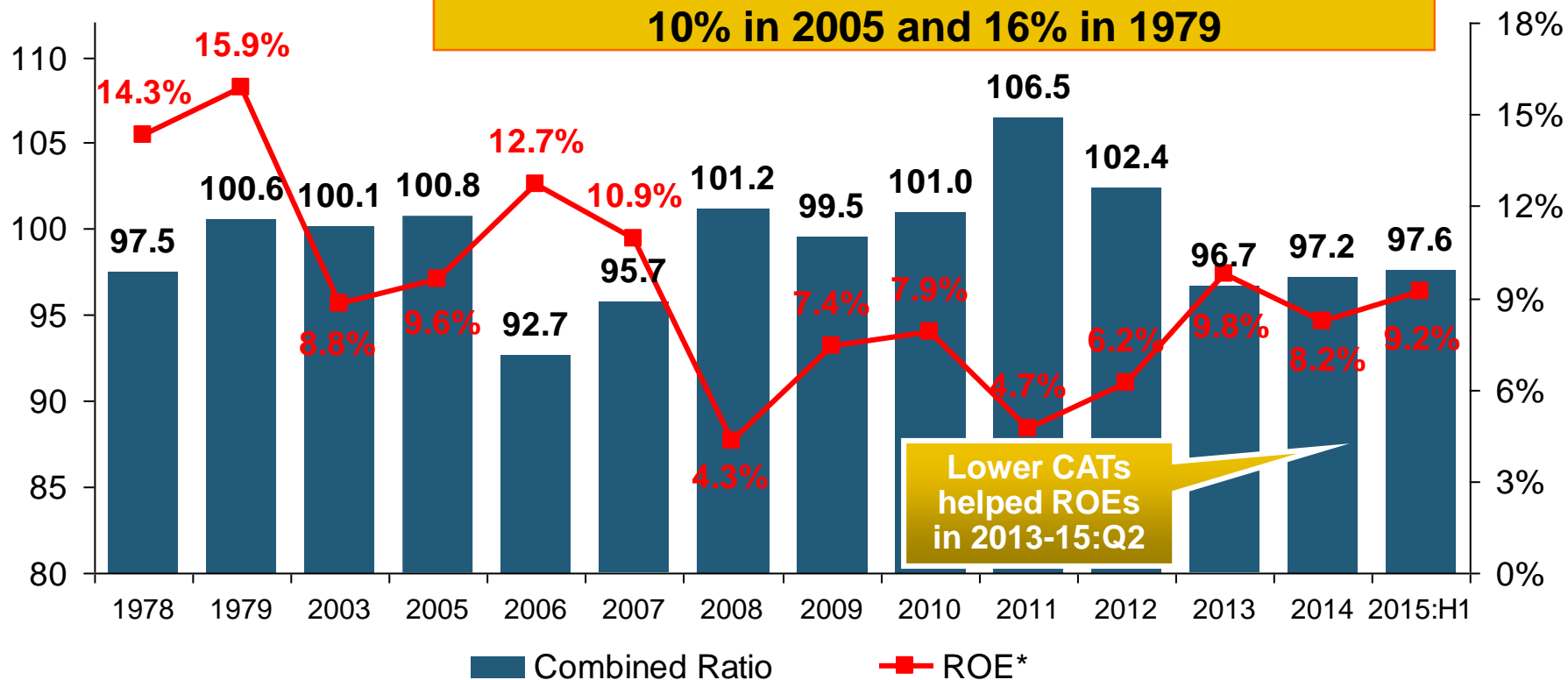
Sources: A.M. Best, ISO.



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

## Combined Ratio / ROE

**A combined ratio of about 100 generates an ROE of ~7.0% in 2012/13, ~7.5% ROE in 2009/10, 10% in 2005 and 16% in 1979**



**Lower CATs  
helped ROEs  
in 2013-15:Q2**

**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%.

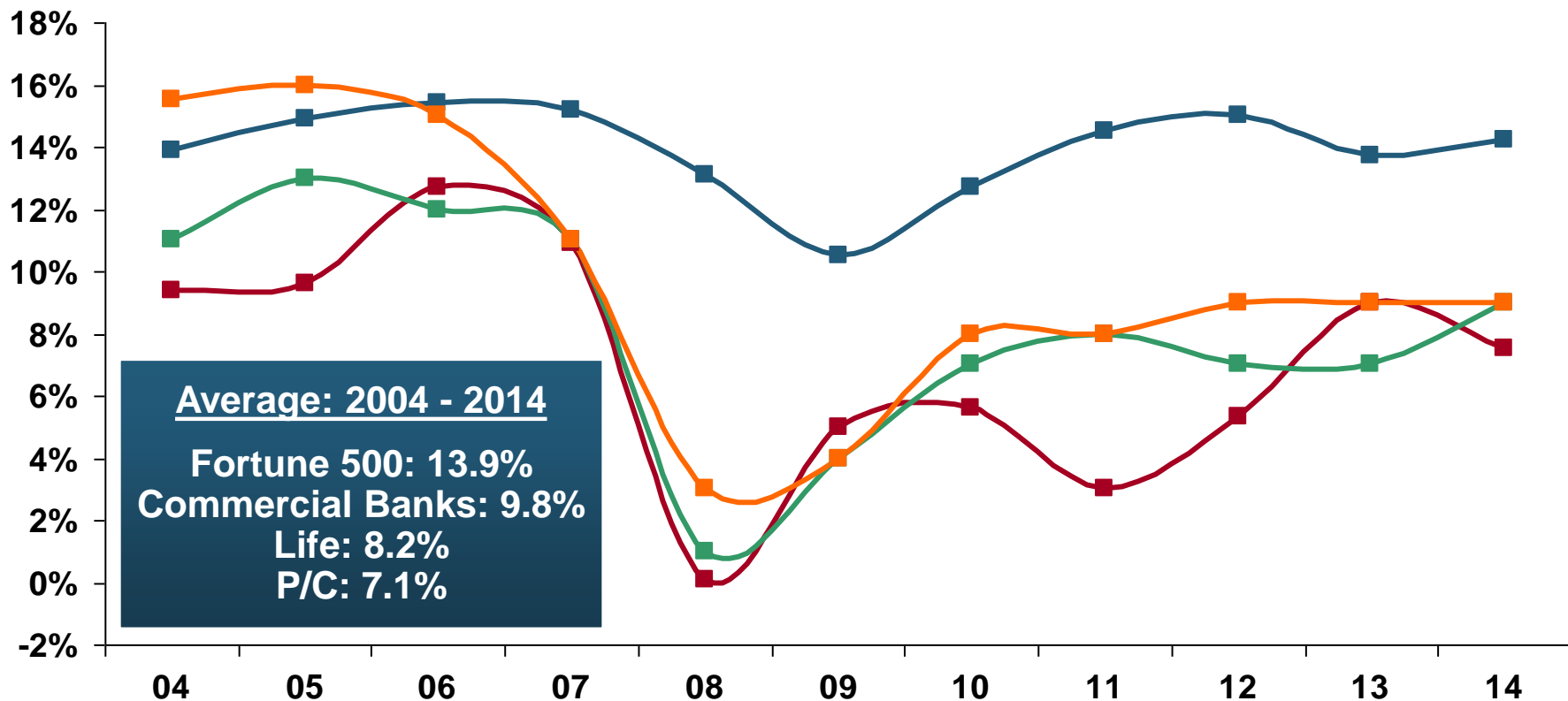
Source: Insurance Information Institute from A.M. Best and ISO Verisk Analytics data.



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

(Percent)

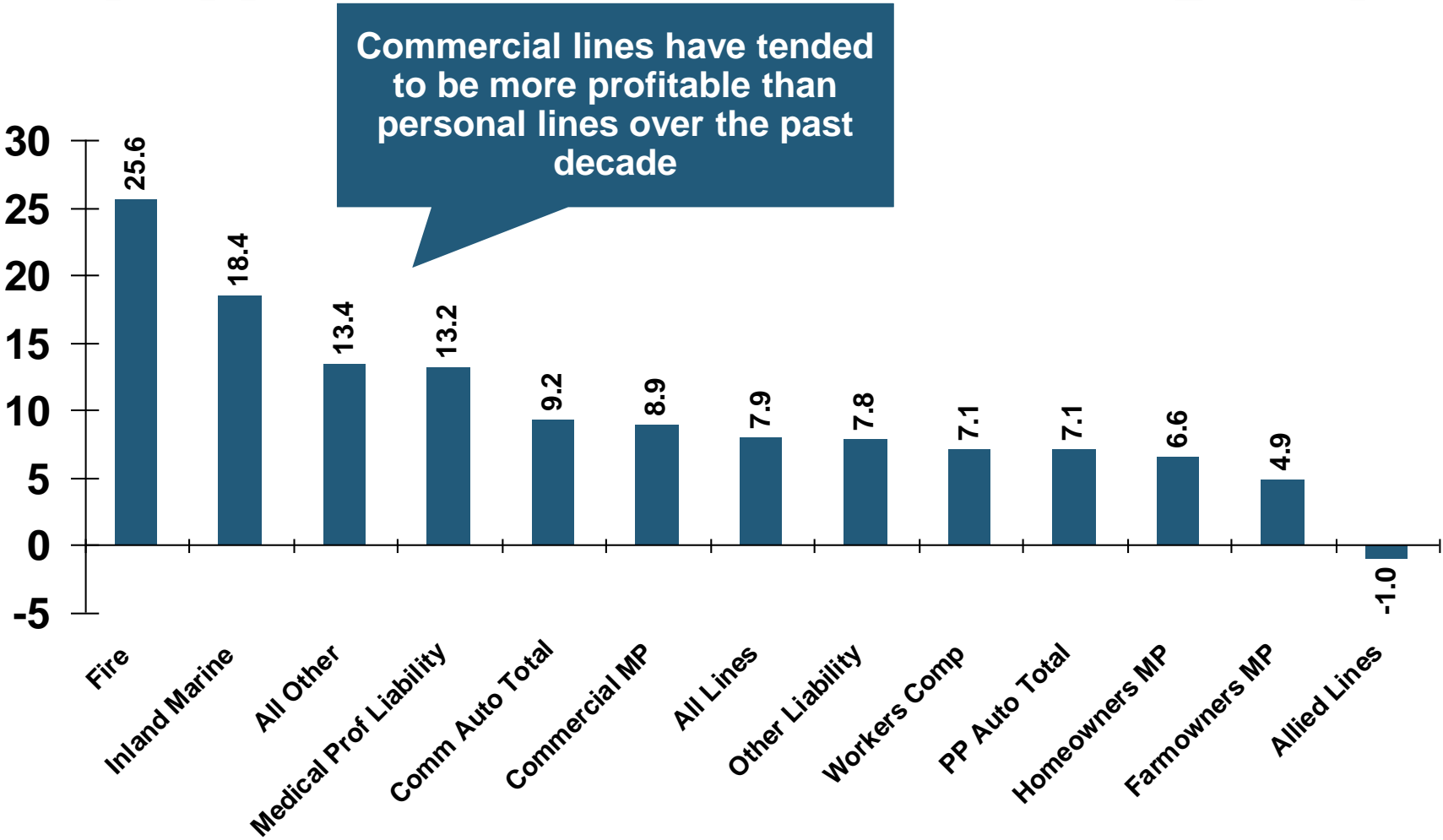
■ Fortune 500 ■ P/C Insurers ■ Life Insurers ■ Commercial Banks



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

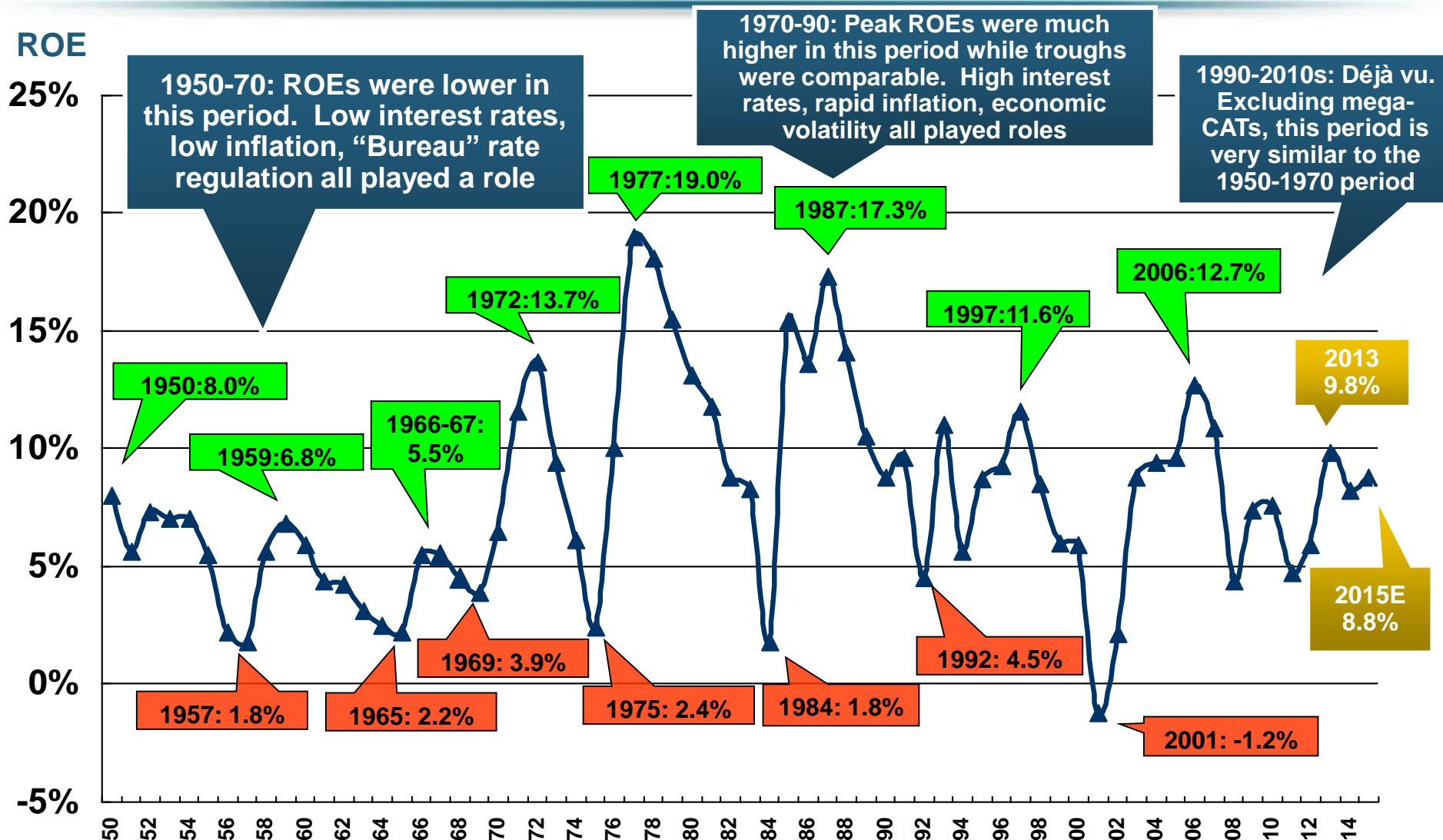


# Return on Net Worth (RNW) All Lines: 2004-2013 Average





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



\*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.

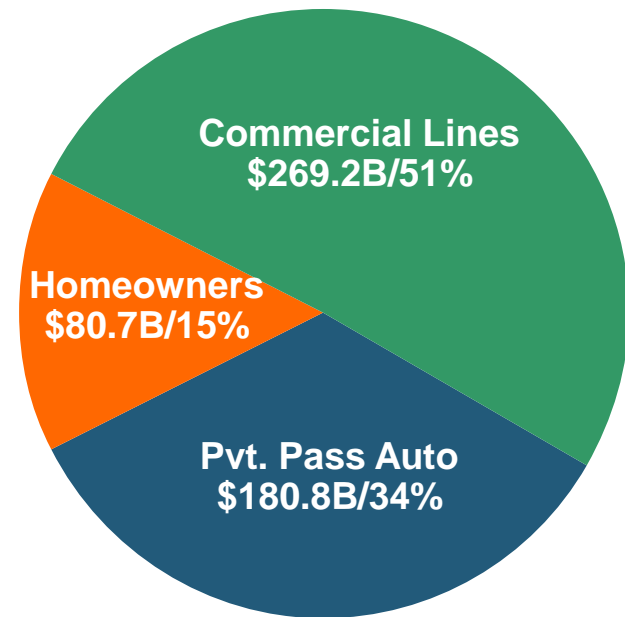


# Distribution of Direct Premiums Written by Segment/Line, 2013

## Distribution Facts

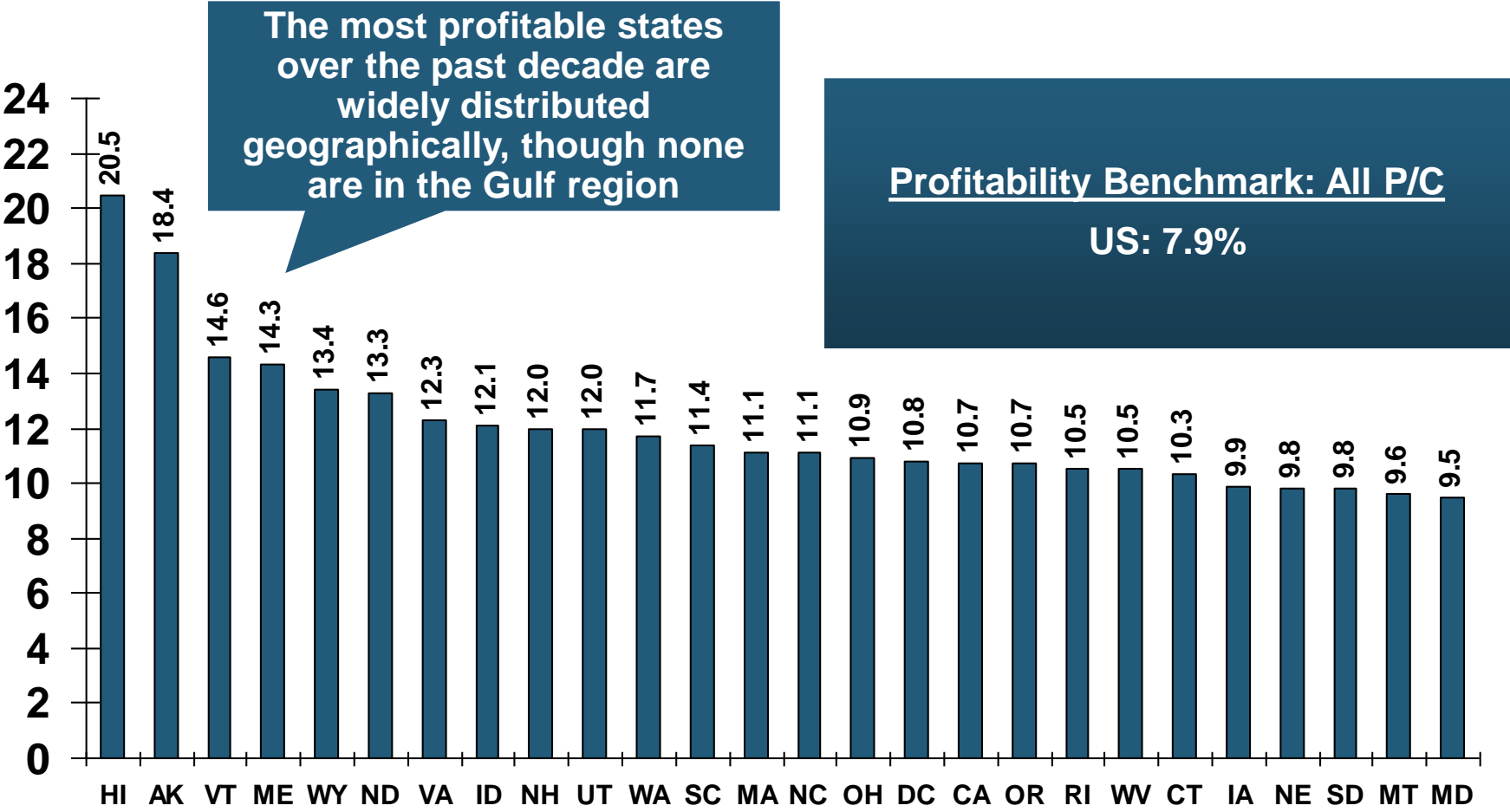
- Personal/Commercial lines split has been about 50/50 for many years
- Pvt. Passenger Auto is by far the largest line of insurance and is currently the most important source of industry profits
- Billions of additional dollars in homeowners insurance premiums are written by state-run residual market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

2013



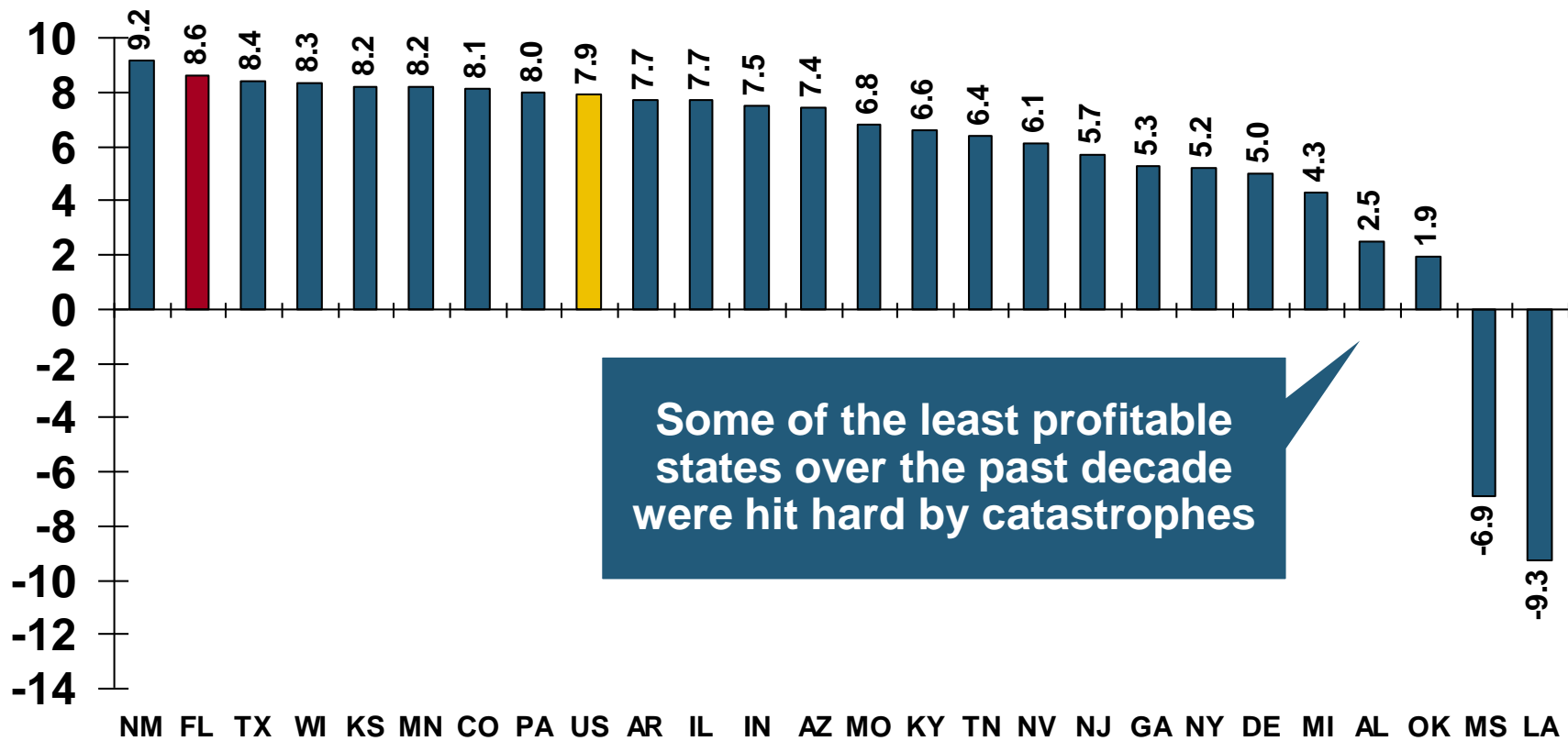


# RNW All Lines by State, 2004-2013 Average: Highest 25 States





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

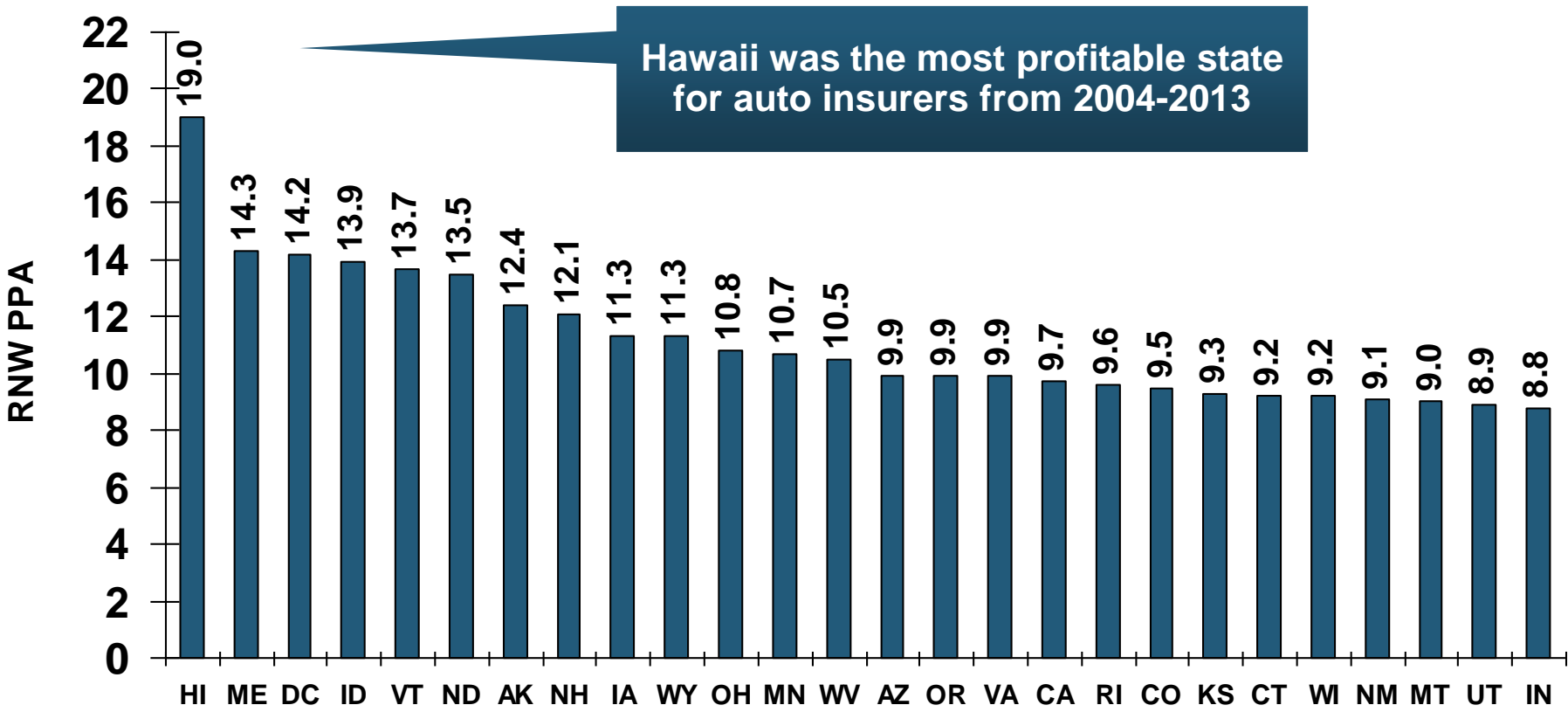




# Return on Net Worth: Pvt. Passenger Auto, 10-Year Average (2004-2013\*)

## Top 25 States

(Percent)



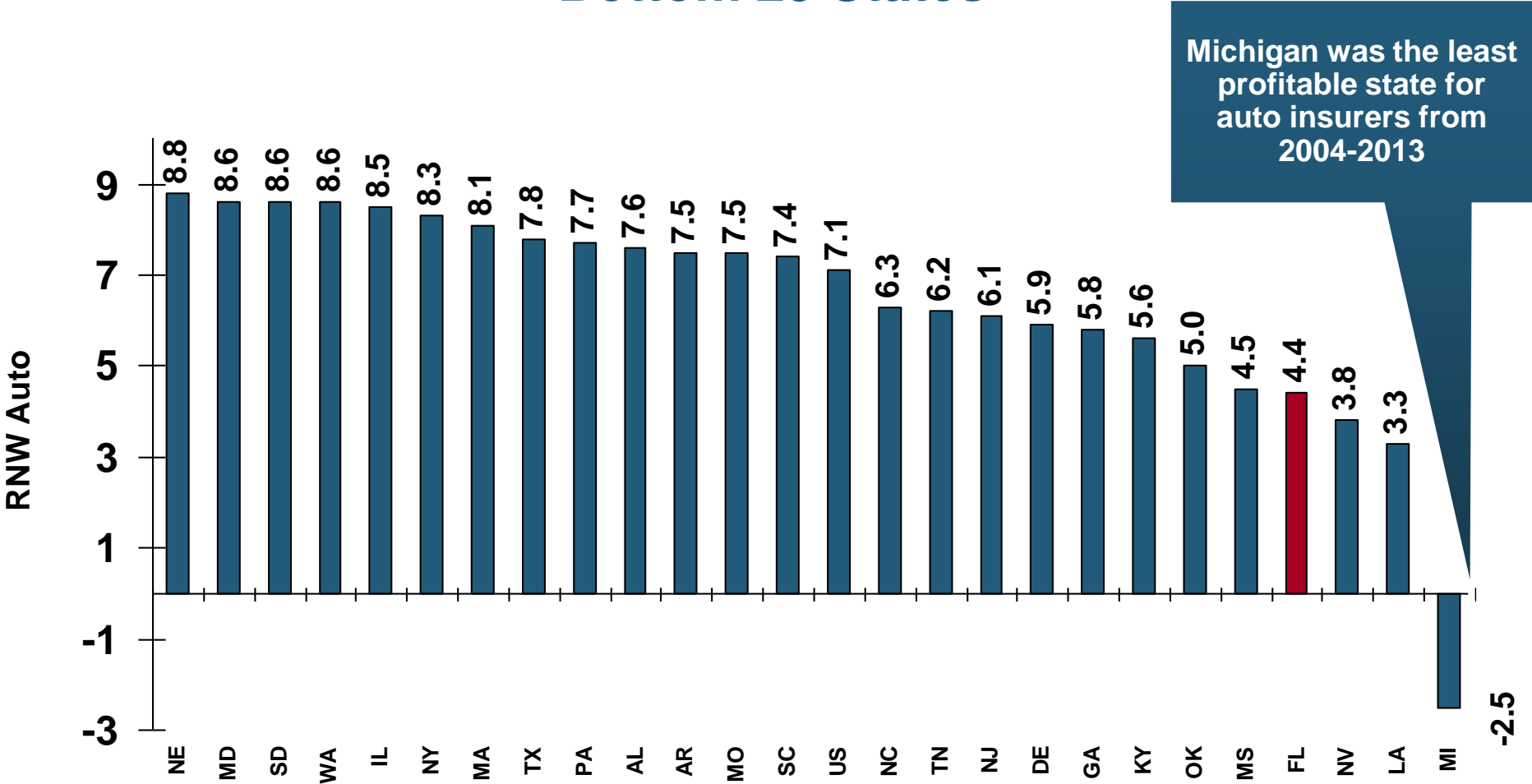
\*Latest available.  
Sources: NAIC.



# Return on Net Worth: Pvt. Passenger Auto, 10-Year Average (2004-2013\*)

(Percent)

## Bottom 25 States



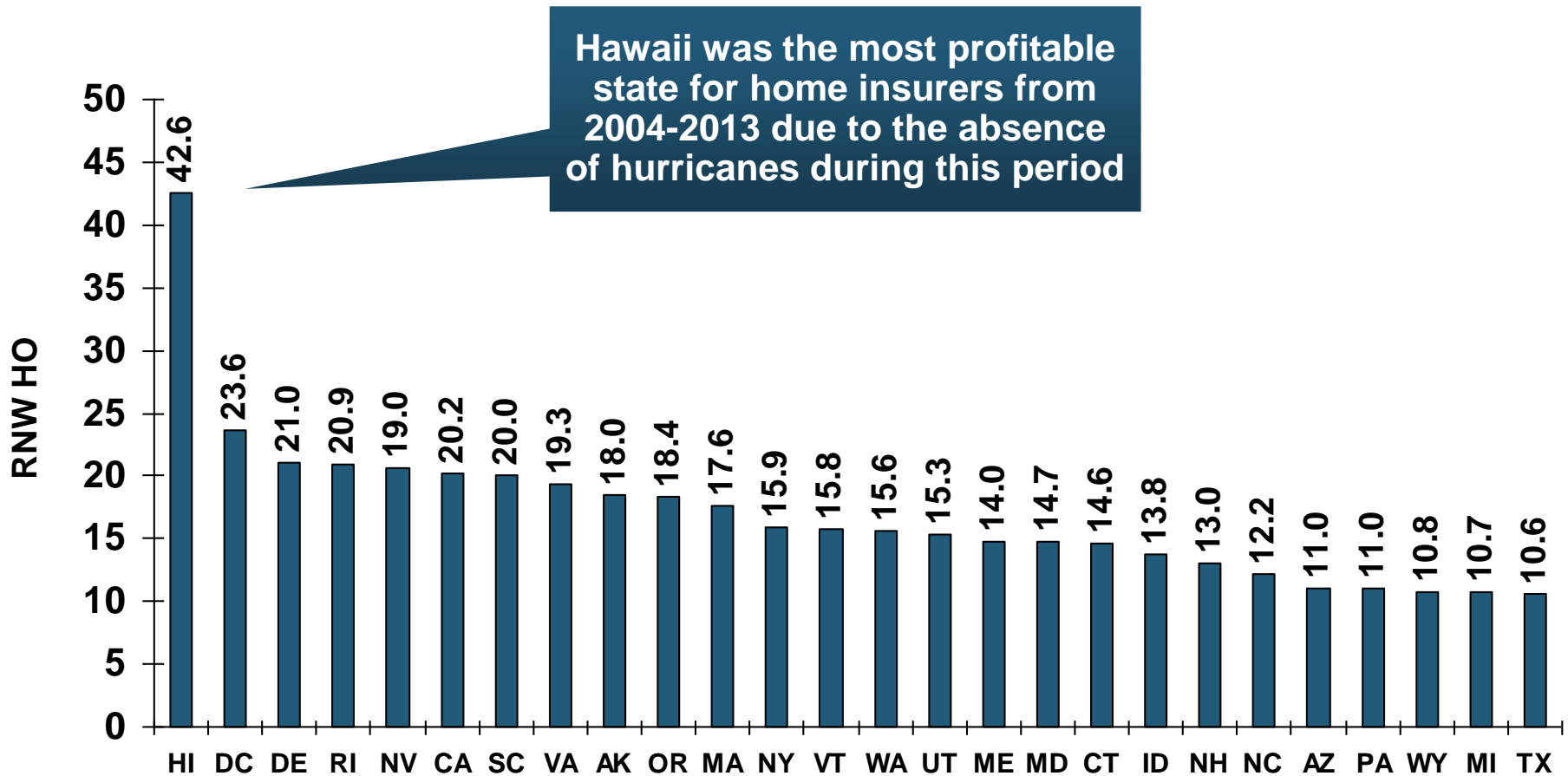
\*Latest available.  
Sources: NAIC



# Return on Net Worth: Homeowners Insurance, 10-Year Average (2004-2013\*)

## Top 25 States

(Percent)

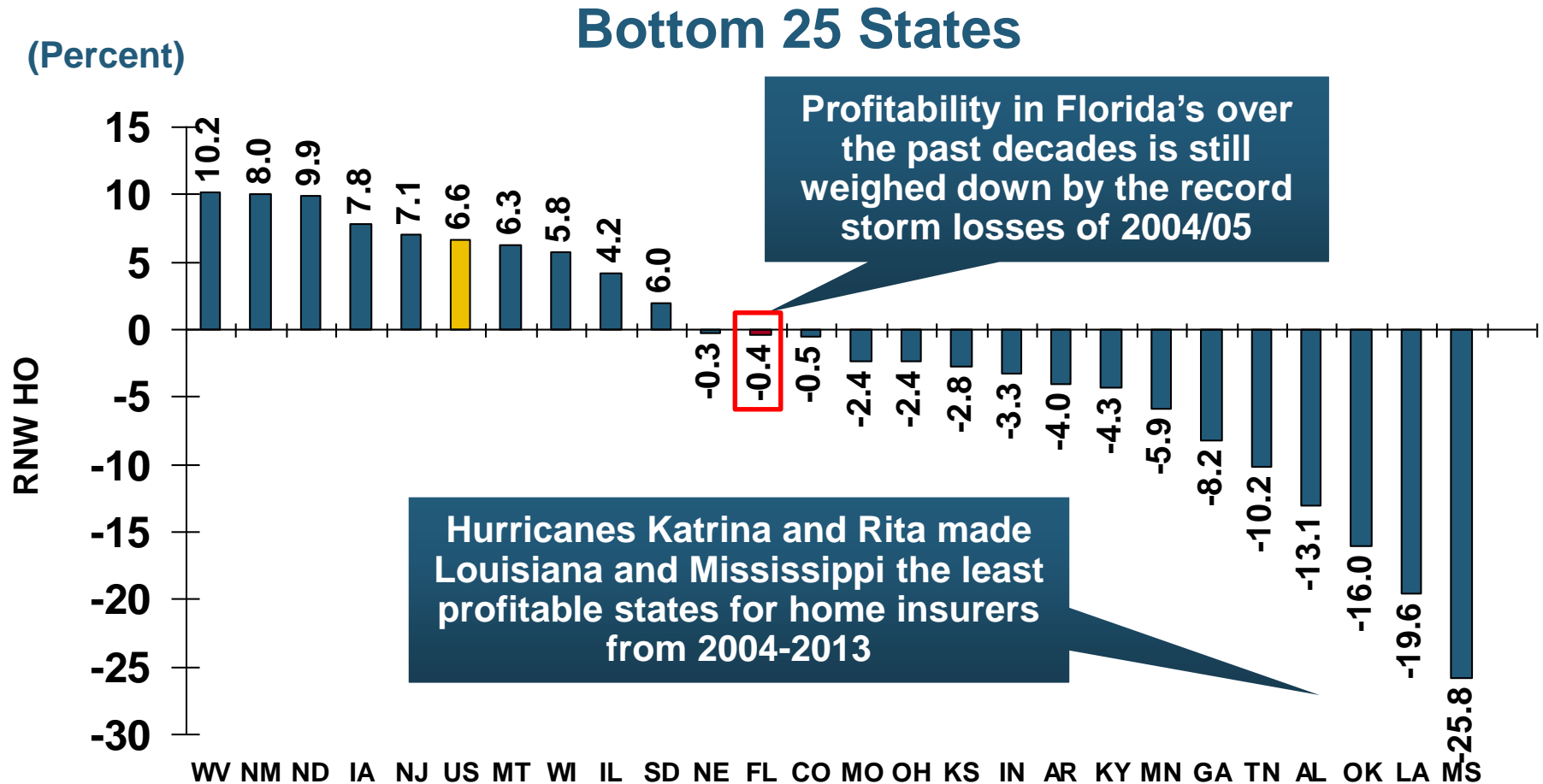


\*Latest available.

Sources: NAIC.



# Return on Net Worth: Homeowners Insurance, 10-Year Average (2004-2013\*)



\*Latest available.

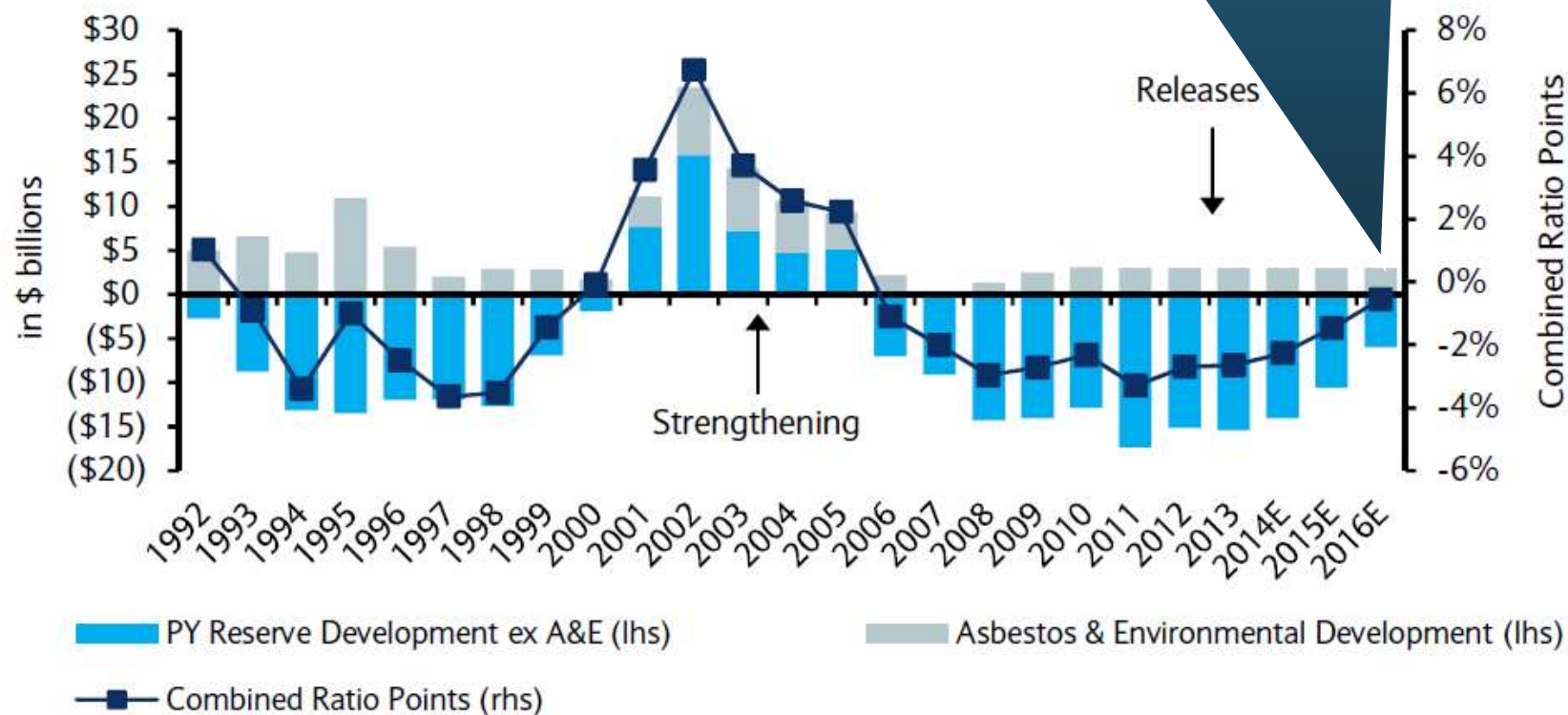
Sources: NAIC



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

## Reserve Change

Reserve releases are expected to gradually taper off, but will continue to benefit the bottom line and combined ratio through at least 2016



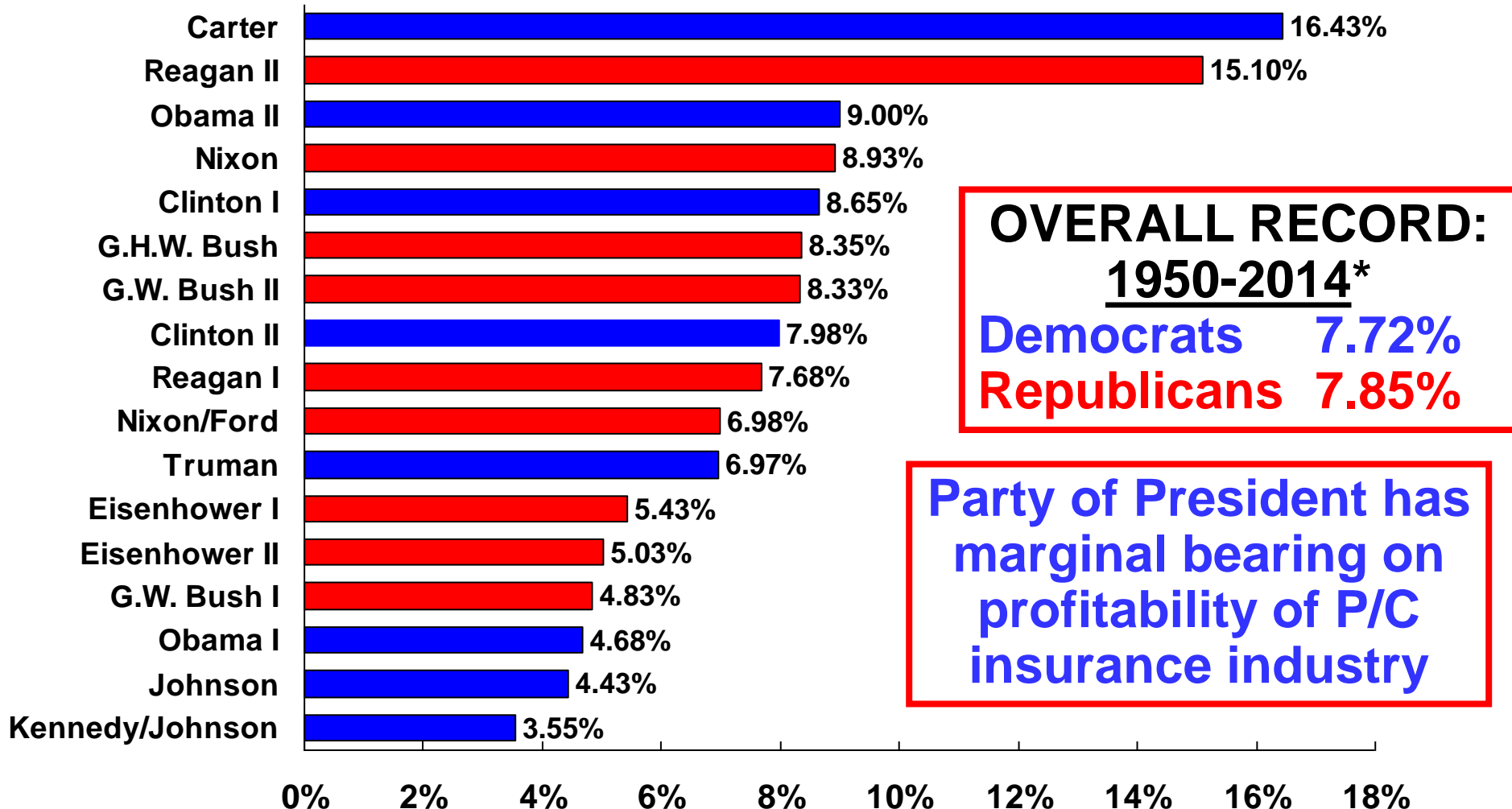


# Profitability & Politics

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



# P/C Insurance Industry ROE by Presidential Administration, 1950-2014\*



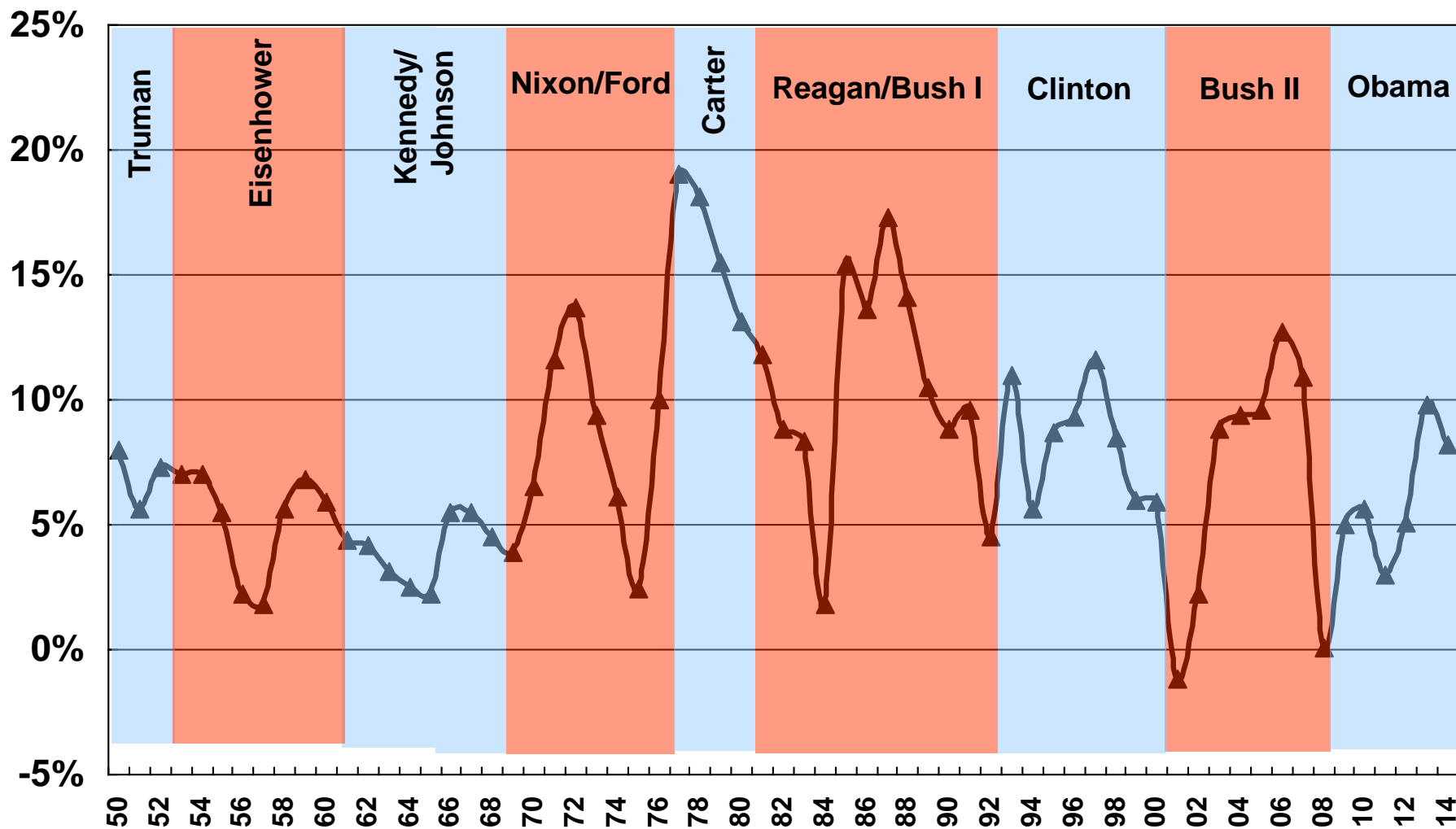
\*Truman administration ROE of 6.97% based on 3 years only, 1950-52;.  
Source: Insurance Information Institute



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

**BLUE** = Democratic President

**RED** = Republican President







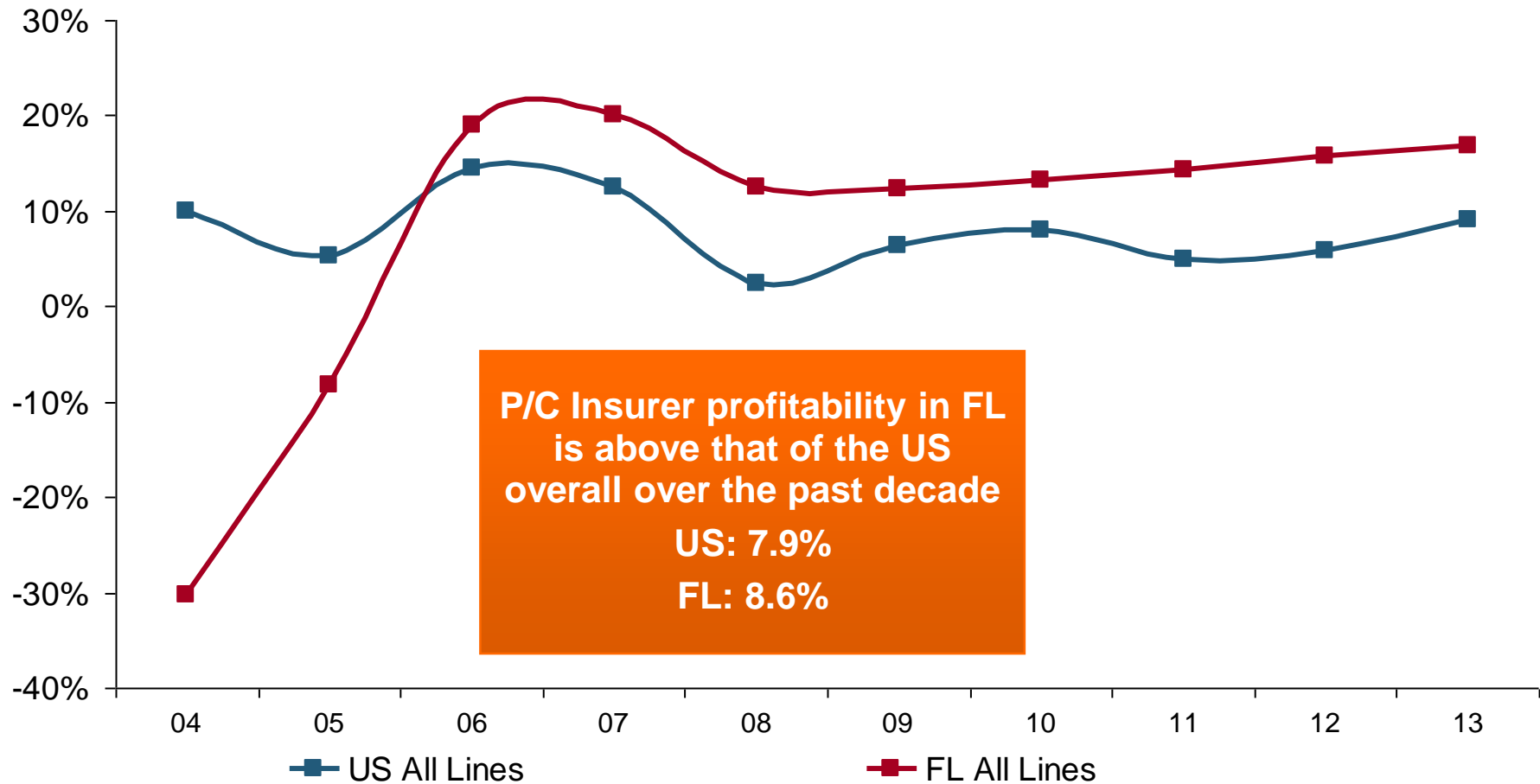
# **Profitability and Growth in Florida P/C Insurance Markets**

## **Analysis by Line and Nearby State Comparisons**



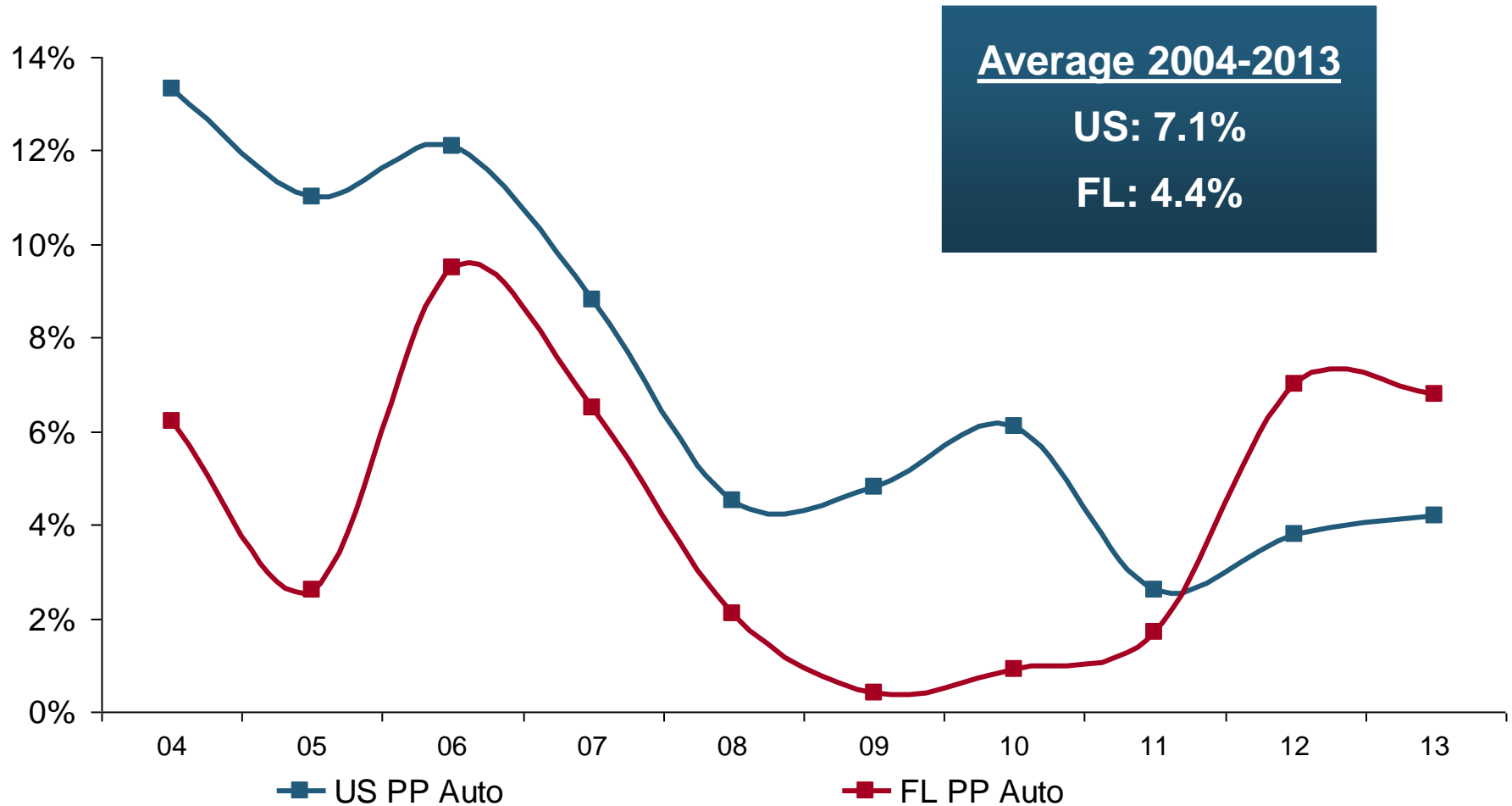
# RNW All Lines: FL vs. U.S., 2004-2013

(Percent)





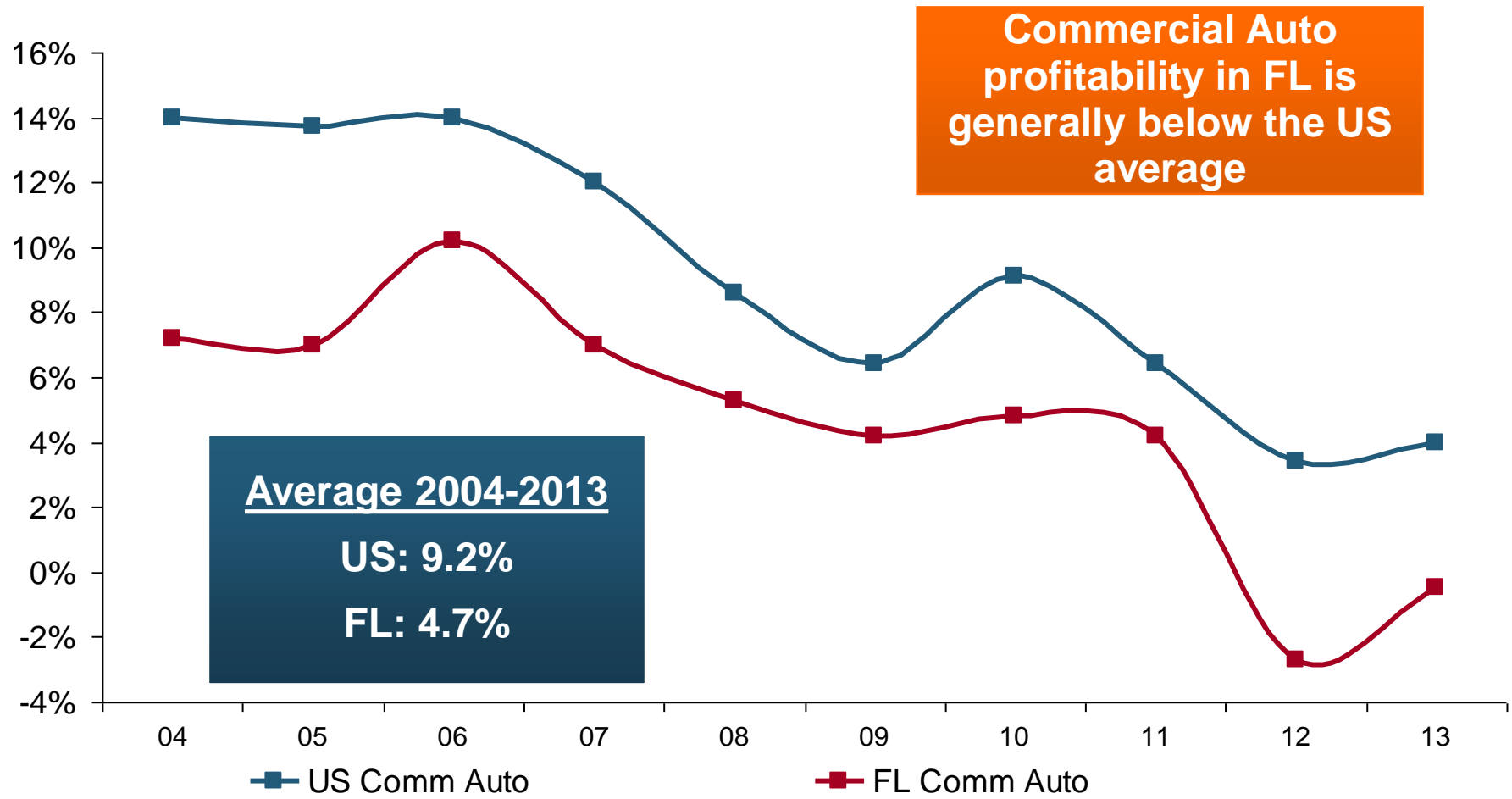
# RNW PP Auto: FL vs. U.S., 2004-2013





# RNW Comm. Auto: FL vs. U.S., 2004-2013

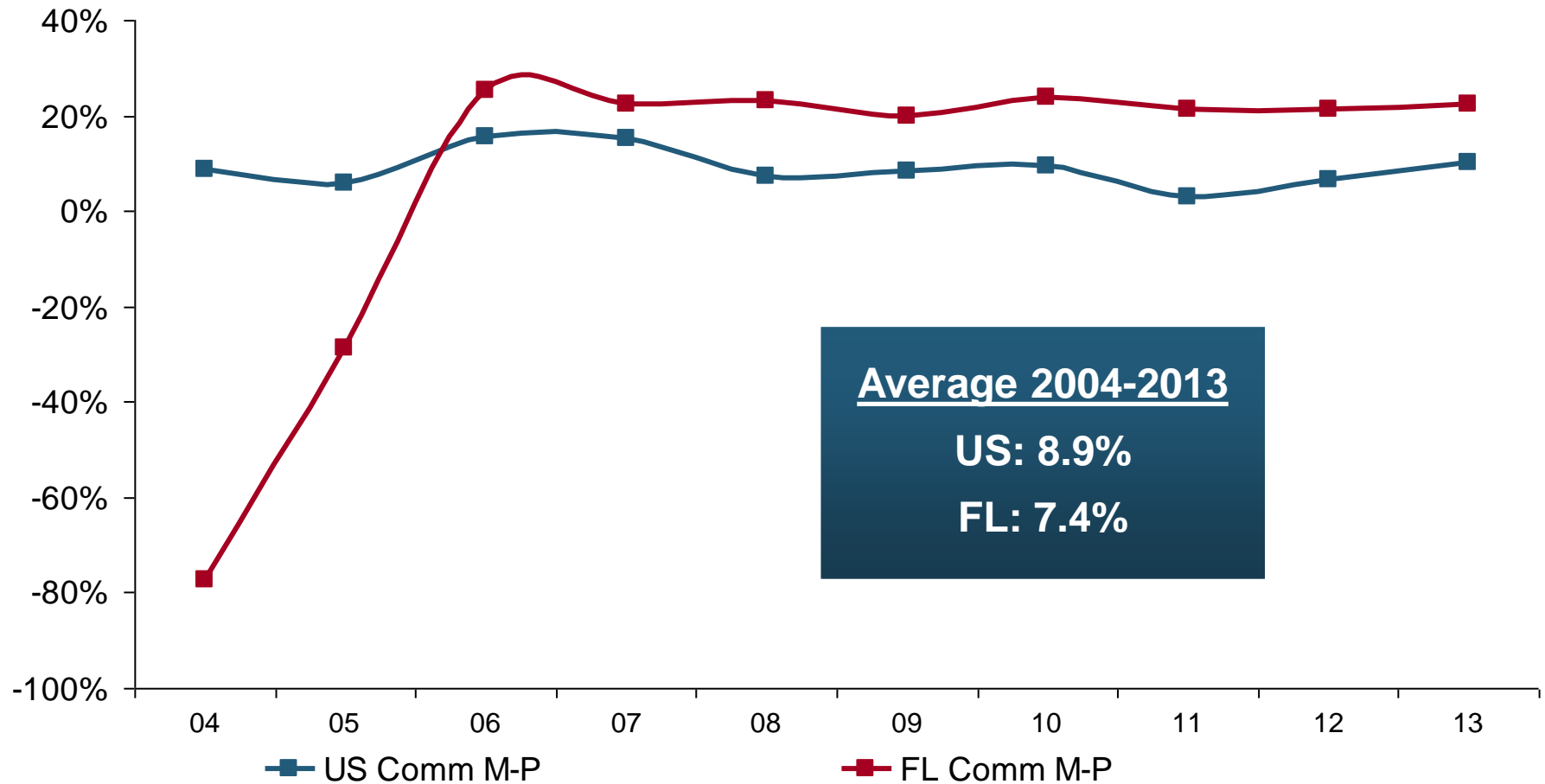
(Percent)





# RNW Comm. Multi-Peril: FL vs. U.S., 2004-2013

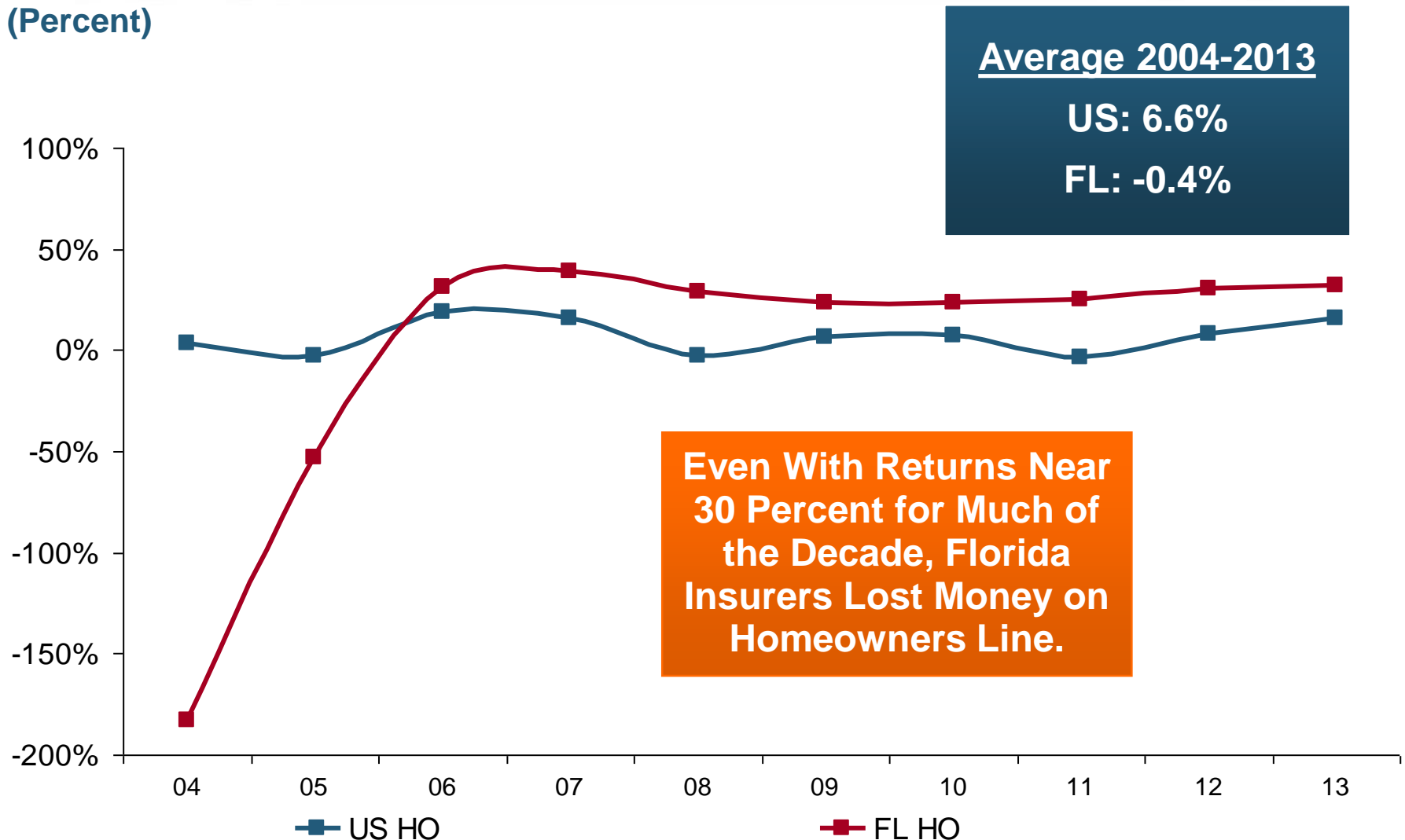
(Percent)





# RNW Homeowners: FL vs. U.S., 2004-2013

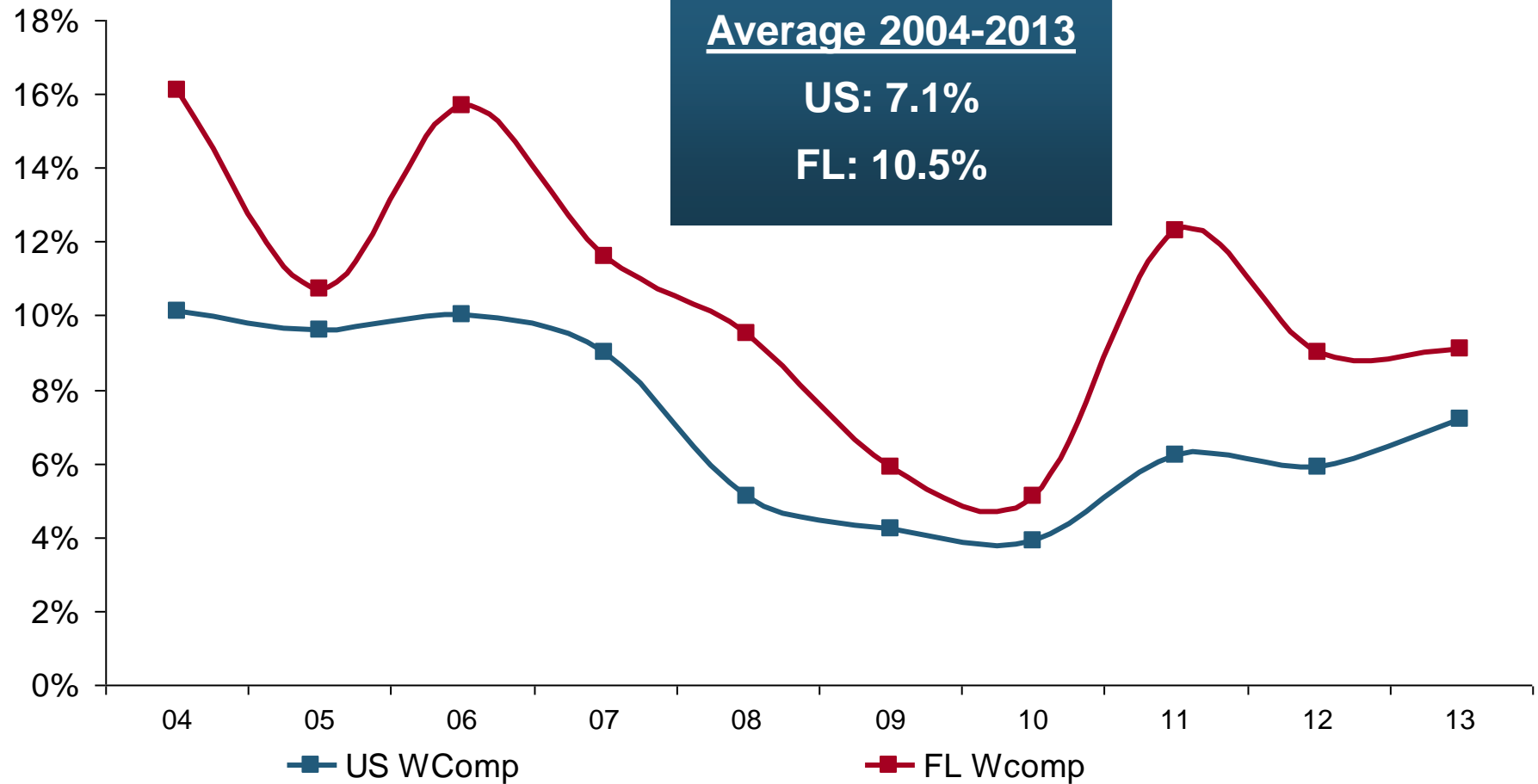
(Percent)





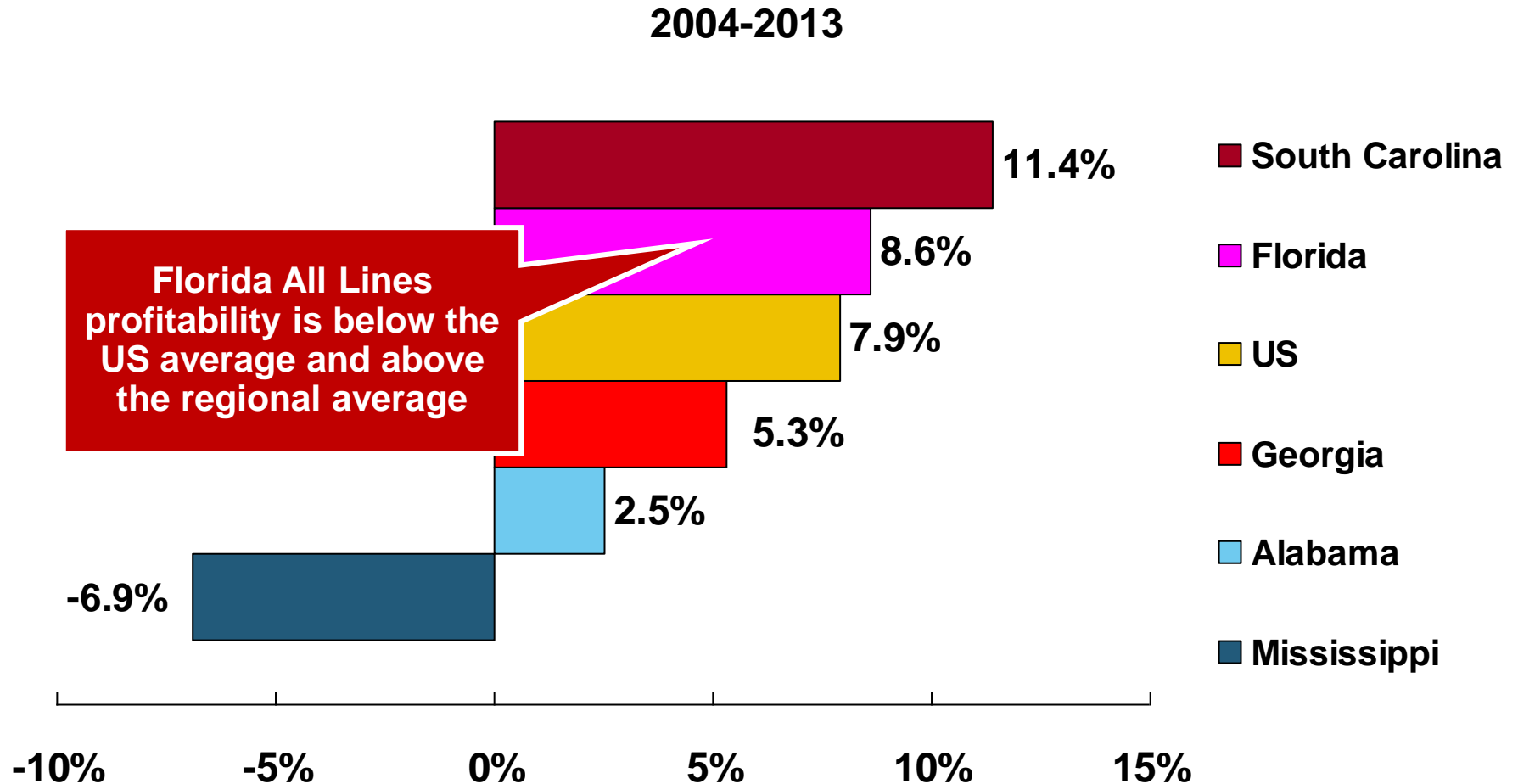
# RNW Workers Comp: FL vs. U.S., 2004-2013

(Percent)





# All Lines: 10-Year Average RNW FL & Nearby States

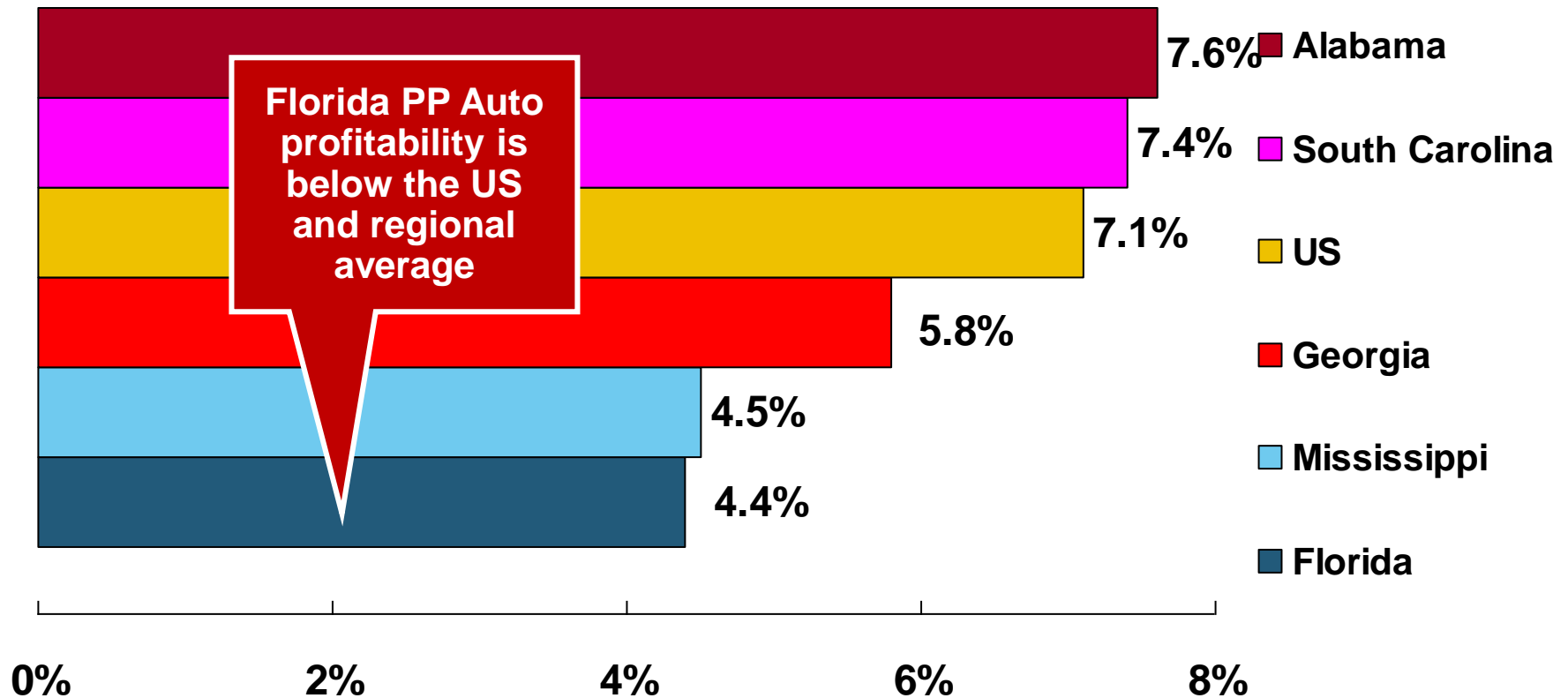


Source: NAIC, Insurance Information Institute



# PP Auto: 10-Year Average RNW FL & Nearby States

2004-2013



Source: NAIC, Insurance Information Institute



# Top Ten Most Expensive And Least Expensive States For Automobile Insurance, 2012 (1)

Rank	Most expensive states	Average expenditure	Rank	Least expensive states	Average expenditure
1	New Jersey	\$1,219.93	1	Idaho	\$534.56
2	D.C.	1,154.91	2	South Dakota	556.51
3	New York	1,152.45	3	Iowa	561.26
4	<b>Florida</b>	<b>1,127.93</b>	4	North Dakota	576.08
5	Louisiana	1,112.53	5	Maine	582.43
6	Delaware	1,065.37	6	Wisconsin	598.84
7	Michigan	1,048.87	7	North Carolina	611.48
8	Rhode Island	1,034.50	8	Nebraska	616.78
9	Connecticut	986.73	9	Wyoming	618.81
10	Massachusetts	976.65	10	Kansas	632.07

**Florida ranked 4th as the most expensive state in 2012, with an average expenditure for auto insurance of \$1,127.93.**

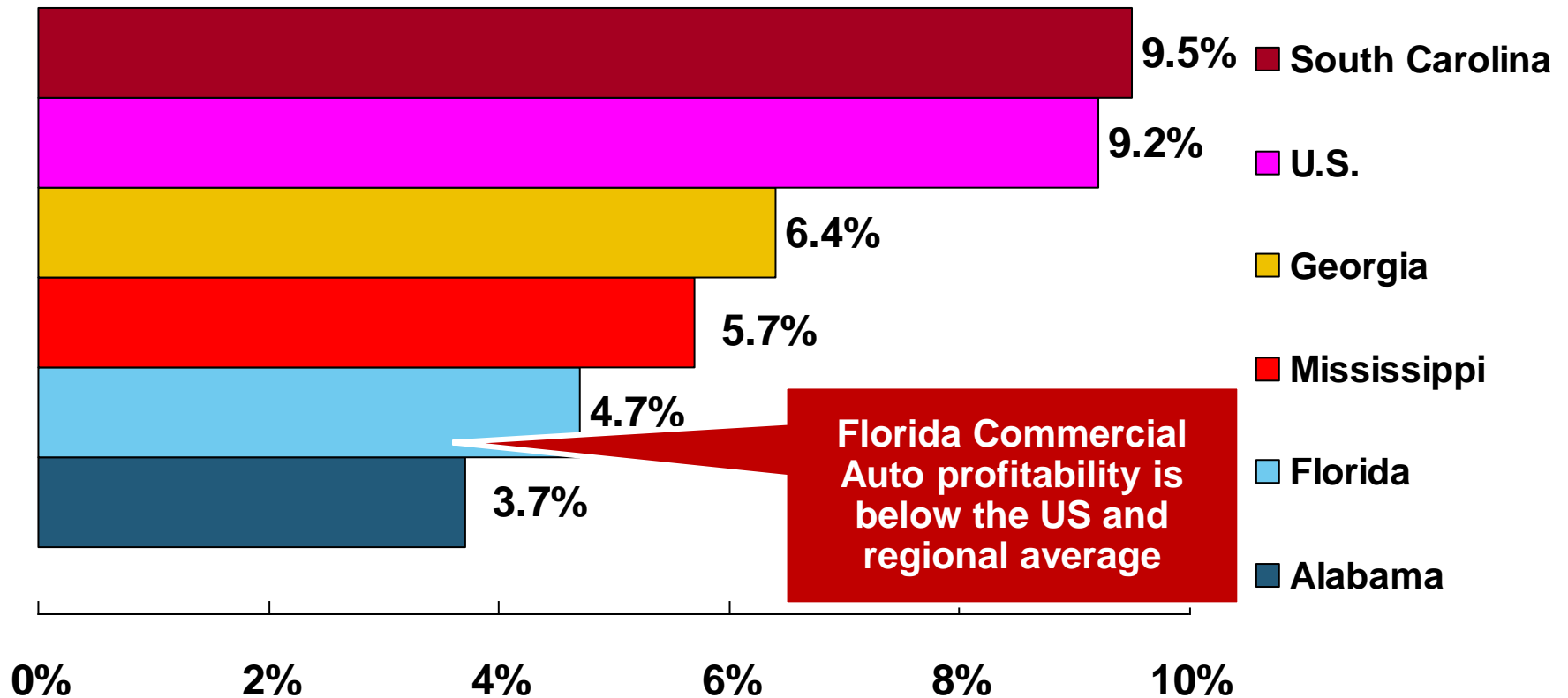
(1) Based on average automobile insurance expenditures.

Source: © 2014 National Association of Insurance Commissioners.



# Comm. Auto: 10-Year Average RNW FL & Nearby States

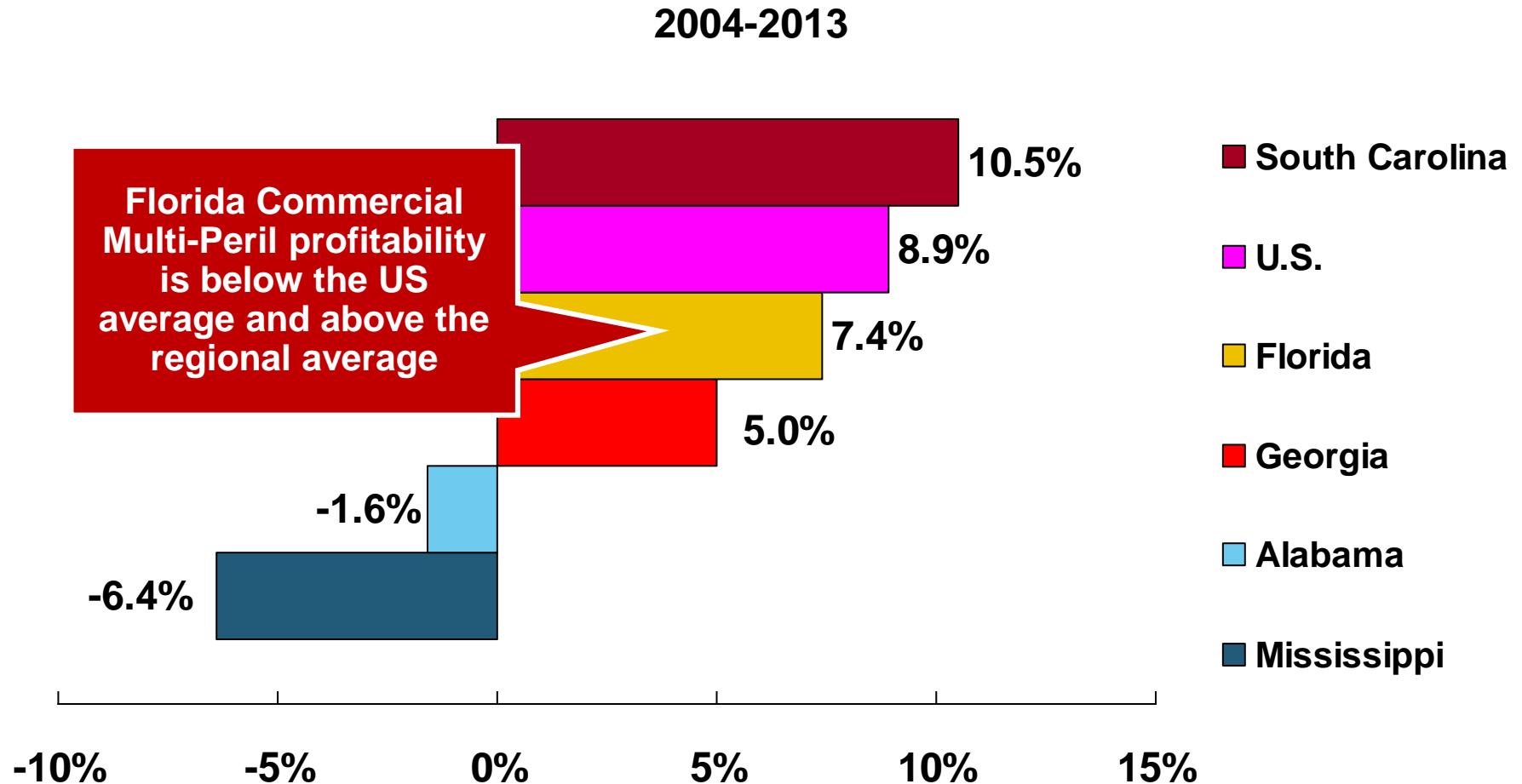
2004-2013



Source: NAIC, Insurance Information Institute



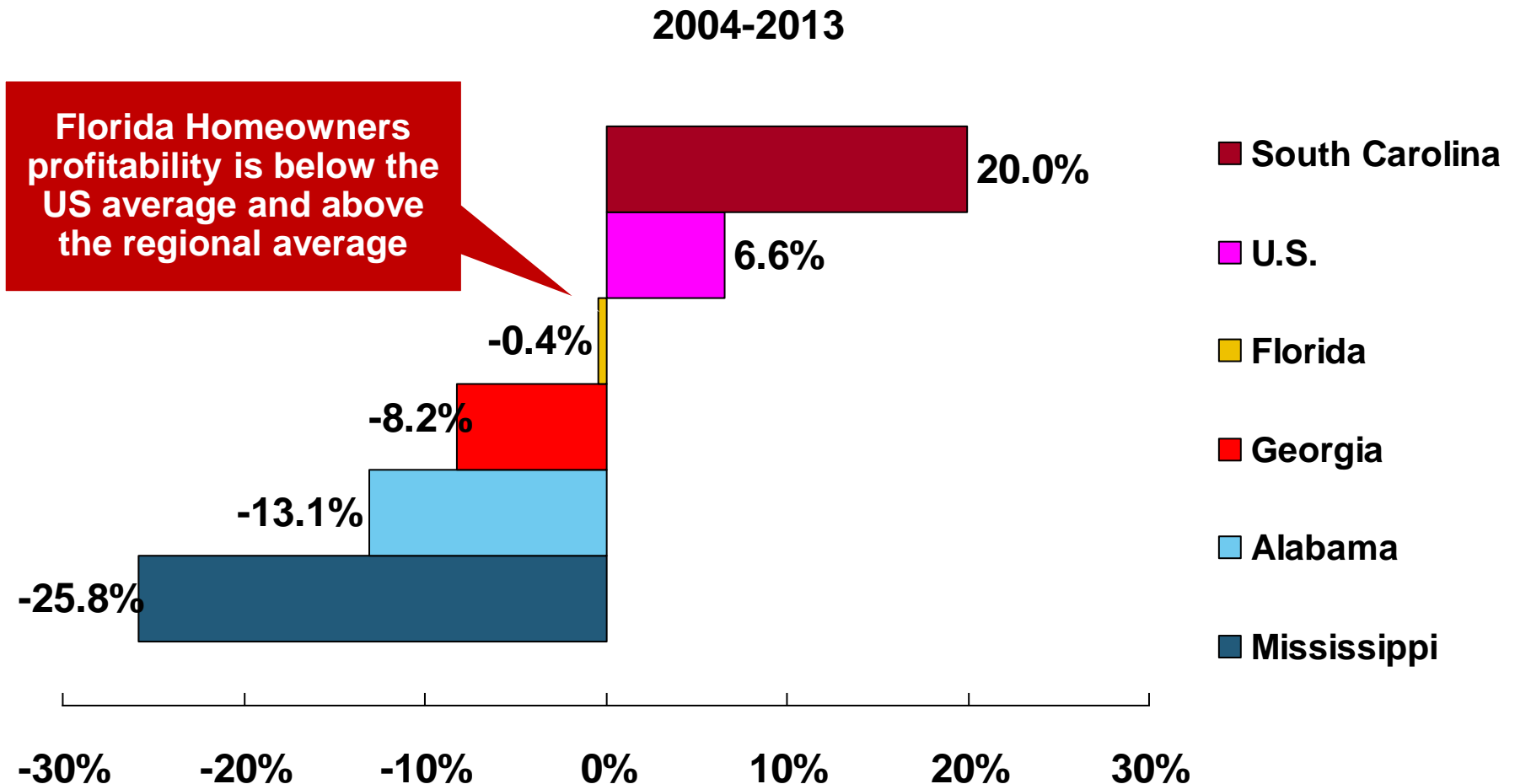
# Comm. M-P: 10-Year Average RNW FL & Nearby States



Source: NAIC, Insurance Information Institute



# Homeowners: 10-Year Average RNW FL & Nearby States



Source: NAIC, Insurance Information Institute



# Top Ten Most Expensive And Least Expensive States For Homeowners Insurance, 2012 (1)

**Florida ranked as the most expensive state for homeowners insurance in 2012, with an average expenditure of \$2,084.**

Rank	Most expensive states	HO average premium	Rank	Least expensive states	HO average premium
1	<b>Florida</b>	<b>\$2,084</b>	1	Idaho	\$538
2	Louisiana	1,742	2	Oregon	567
3	Texas	1,661	3	Utah	580
4	Oklahoma	1,501	4	Wisconsin	631
5	Mississippi	1,314	5	Washington	648
6	Alabama	1,248	6	Nevada	674
7	Rhode Island	1,233	7	Delaware	678
8	Kansas	1,213	8	Arizona	691
9	Connecticut	1,160	9	Ohio	721
10	New York	1,158	10	Maine	741

- (1) Includes policies written by Citizens Property Insurance Corp. (Florida) and Citizens Property Insurance Corp. (Louisiana), Alabama Insurance Underwriting Association, Mississippi Windstorm Underwriting Association, North Carolina Joint Underwriting Association and South Carolina Wind and Hail Underwriting Association. Other southeastern states have wind pools in operation and their data may not be included in this chart. Based on the HO-3 homeowner package policy for owner-occupied dwellings, 1 to 4 family units. Provides “all risks” coverage (except those specifically excluded in the policy) on buildings and broad named-peril coverage on personal property, and is the most common package written.
- (2) The Texas Department of Insurance developed home insurance policy forms that are similar but not identical to the standard forms. In addition, due to the Texas Windstorm Association (which writes wind-only policies) classifying HO-1, 2 and 5 premiums as HO-3, the average premium for homeowners insurance is artificially high.

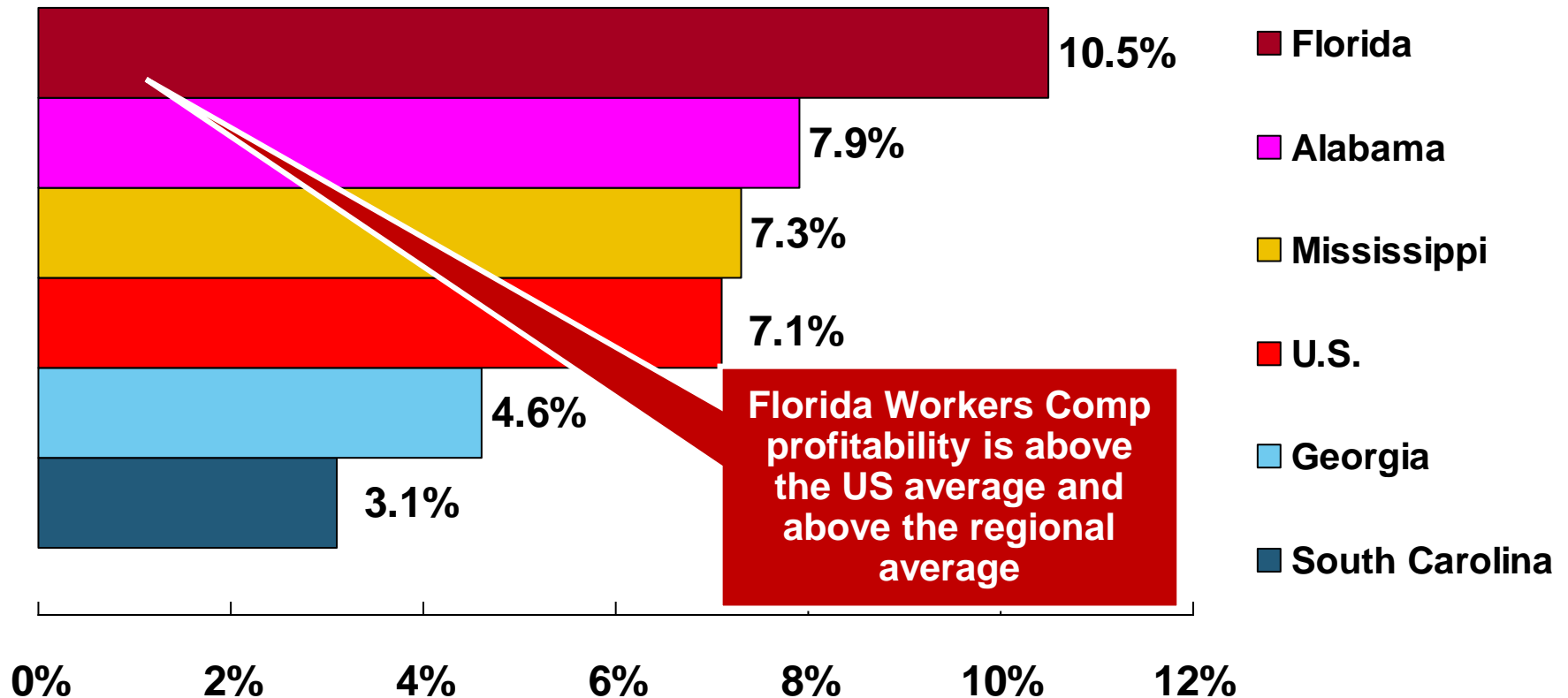
Note: Average premium=Premiums/exposure per house years. A house year is equal to 365 days of insured coverage for a single dwelling. The NAIC does not rank state average expenditures and does not endorse any conclusions drawn from this data.

Source: ©2014 National Association of Insurance Commissioners (NAIC). Reprinted with permission. Further reprint or distribution strictly prohibited without written permission of NAIC.



# Workers Comp: 10-Year Average RNW FL & Nearby States

2004-2013

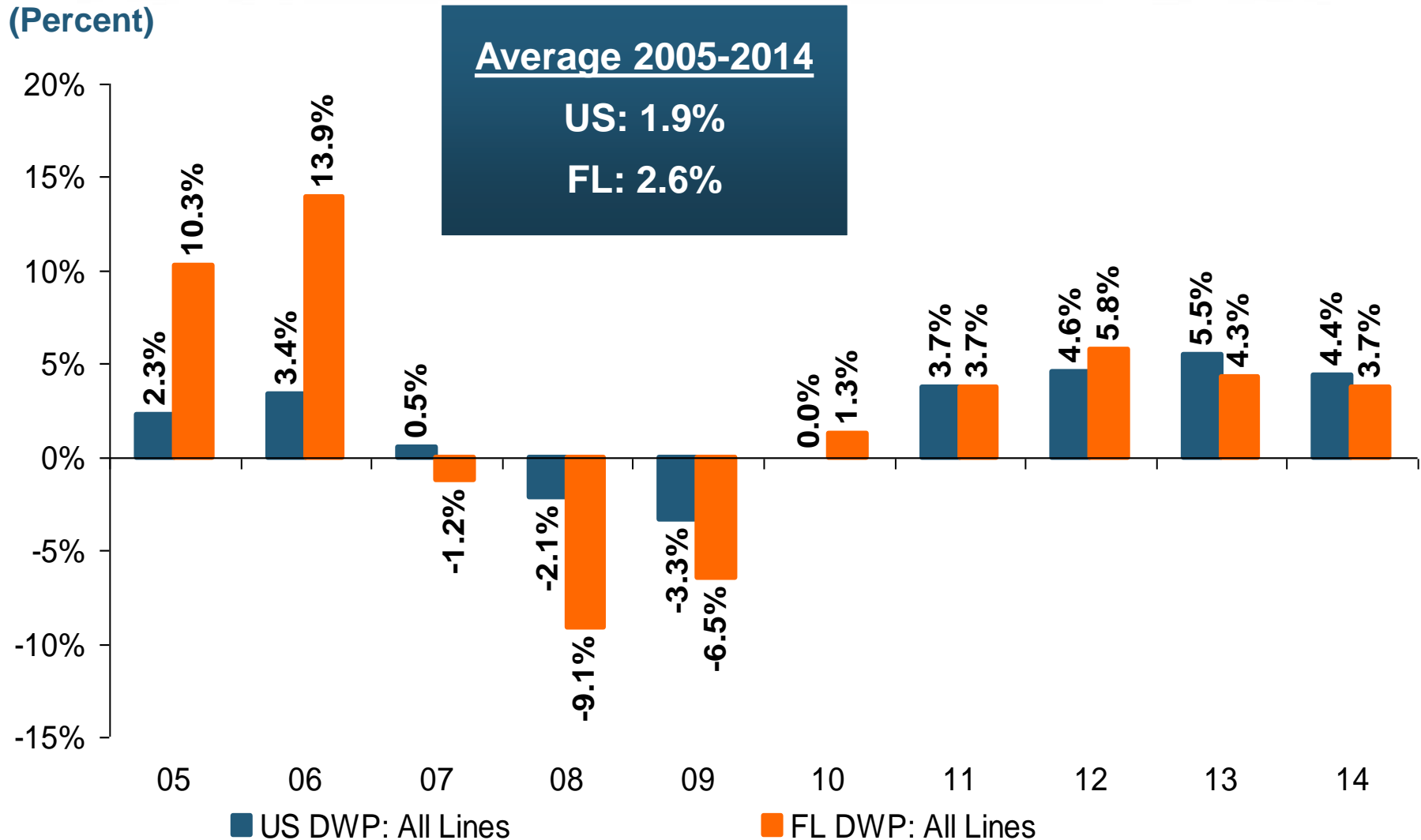


Source: NAIC, Insurance Information Institute



# All Lines DWP Growth: FL vs. U.S., 2005-2014

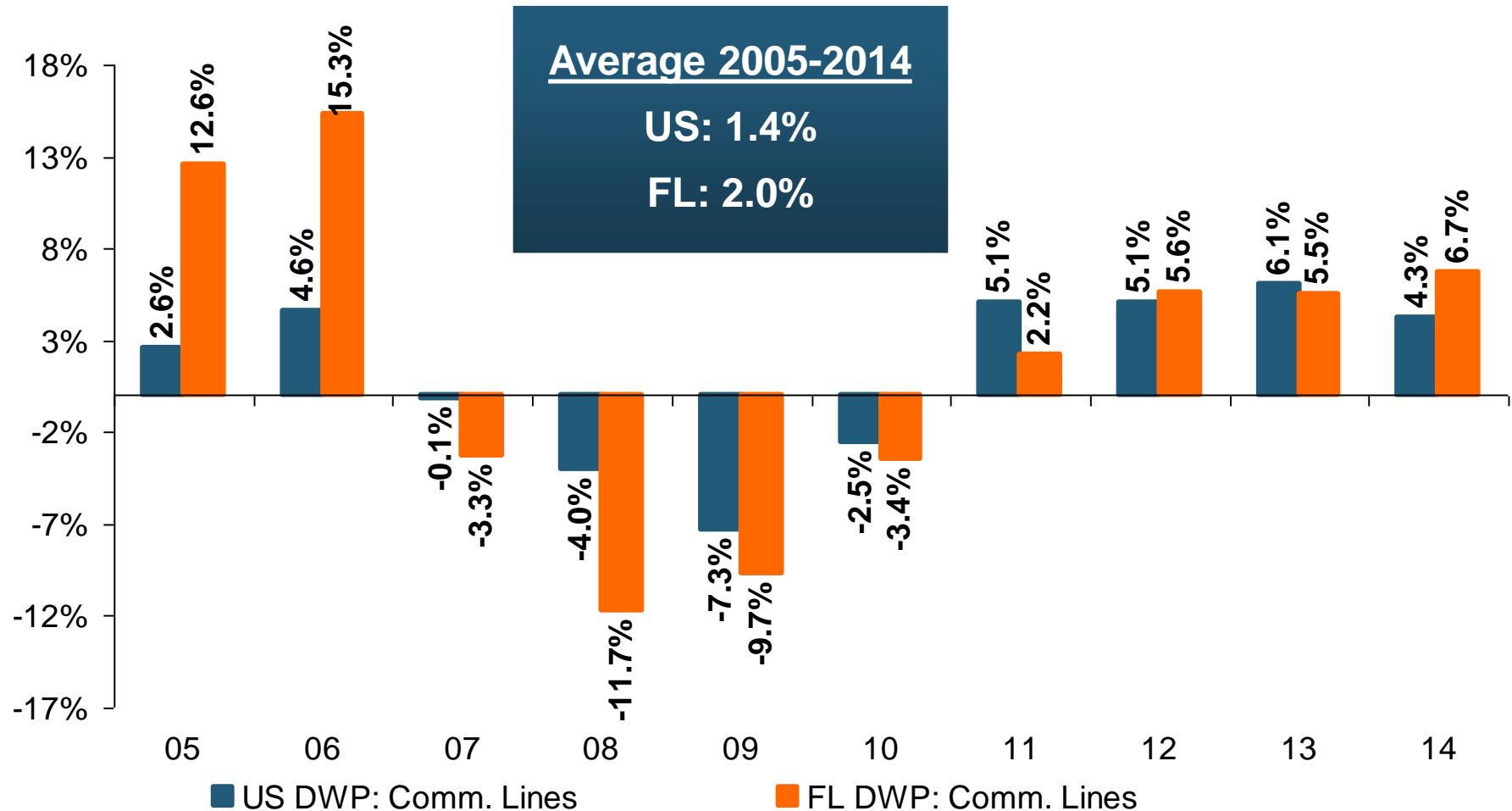
(Percent)





# Comm. Lines DWP Growth: FL vs. U.S., 2005-2014

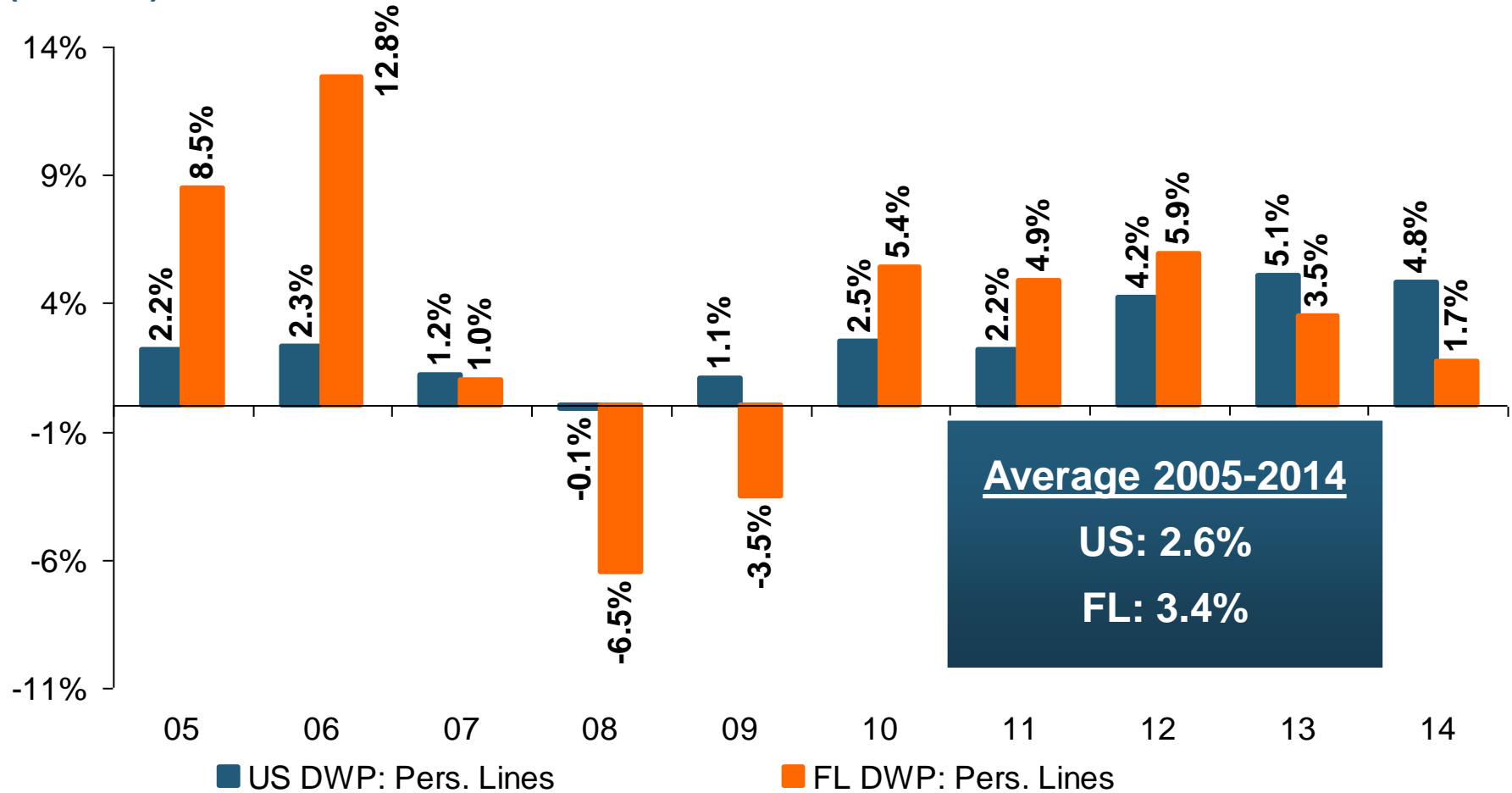
(Percent)





# Personal Lines DWP Growth: FL vs. U.S., 2005-2014

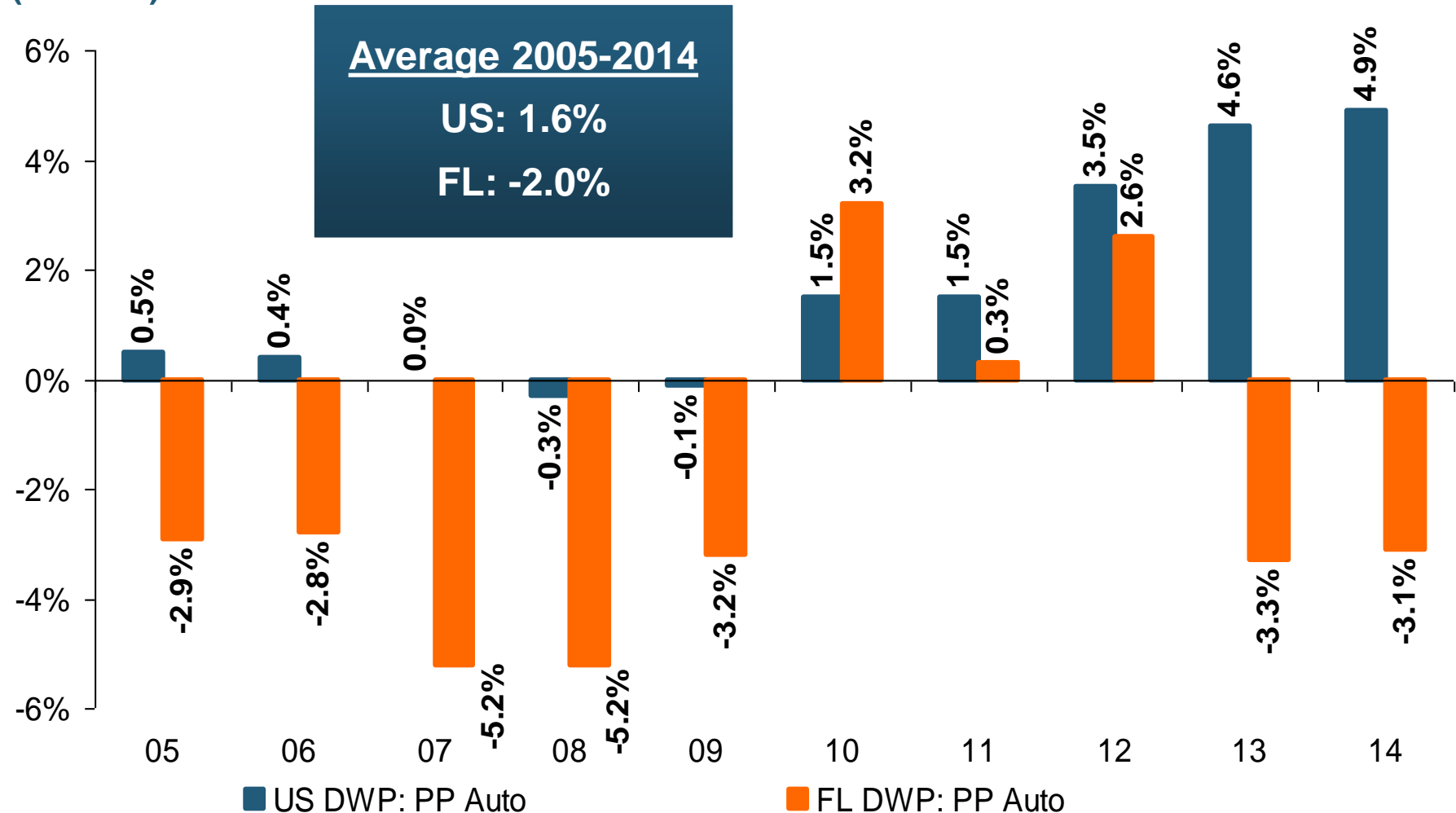
(Percent)





# Private Passenger Auto DWP Growth: FL vs. U.S., 2005-2014

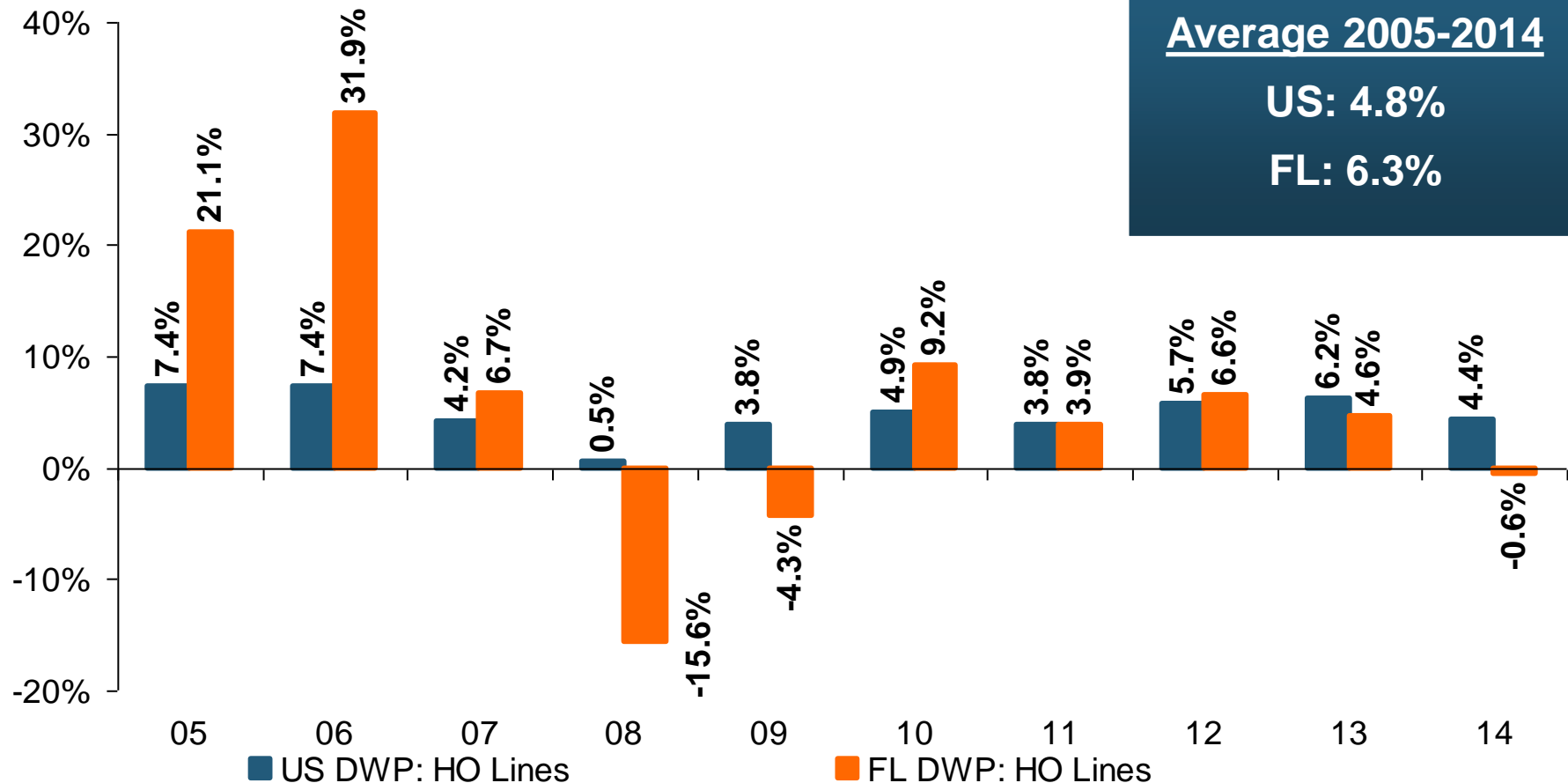
(Percent)





# Homeowner's MP DWP Growth: FL vs. U.S., 2005-2014

(Percent)





# **INVESTMENTS: THE NEW REALITY**

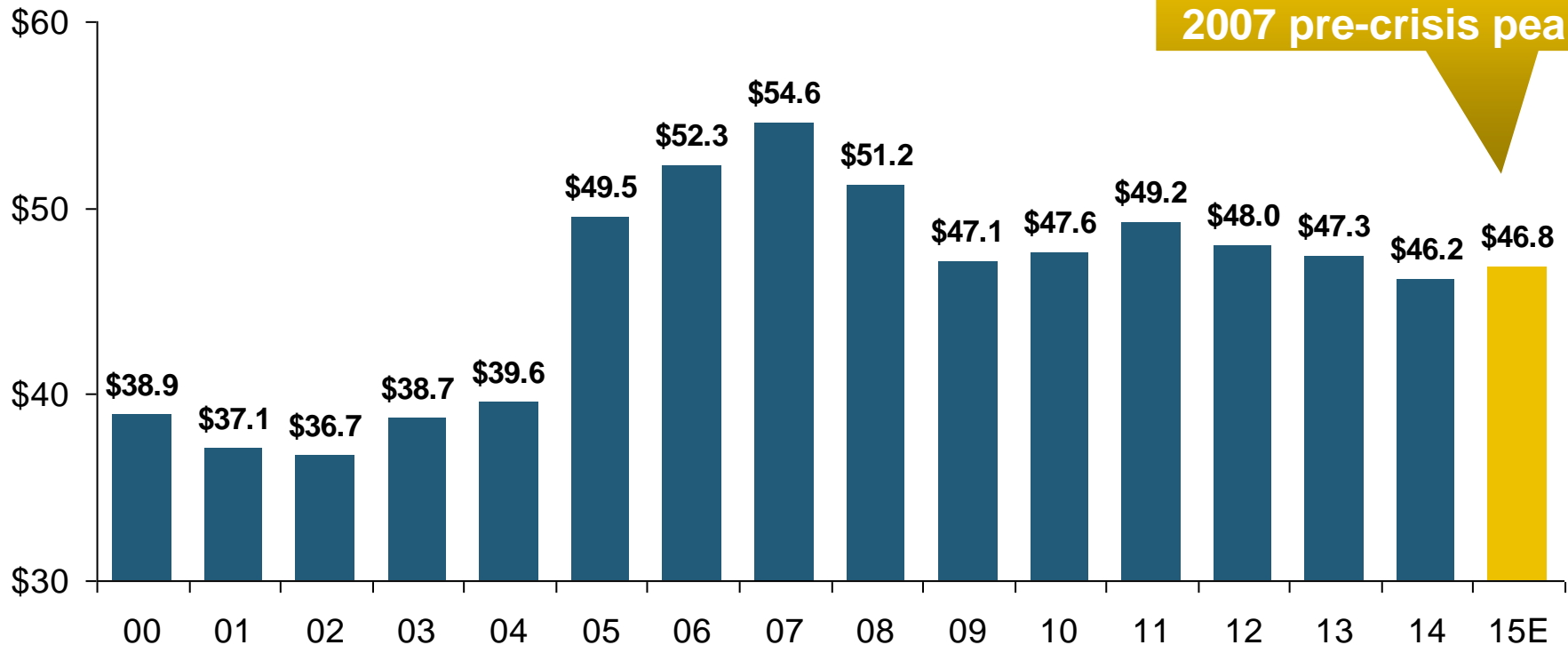
**Investment Performance is a Key  
Driver of Profitability**

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



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

(\$ Billions)



Investment earnings  
are still below their  
2007 pre-crisis peak

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

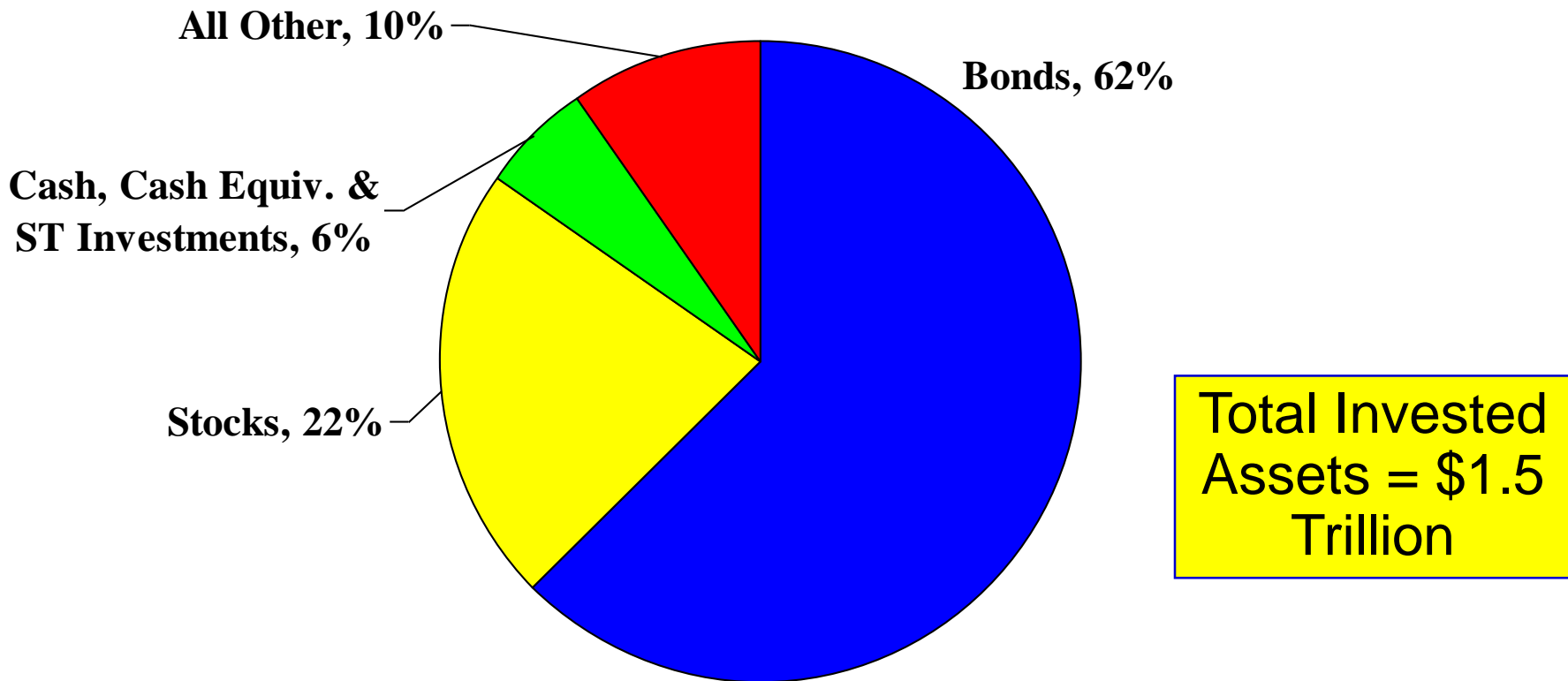
<sup>1</sup> Investment gains consist primarily of interest and stock dividends.  
Sources: ISO; Insurance Information Institute.

\*2015 figure is estimated based on annualized data through Q2.



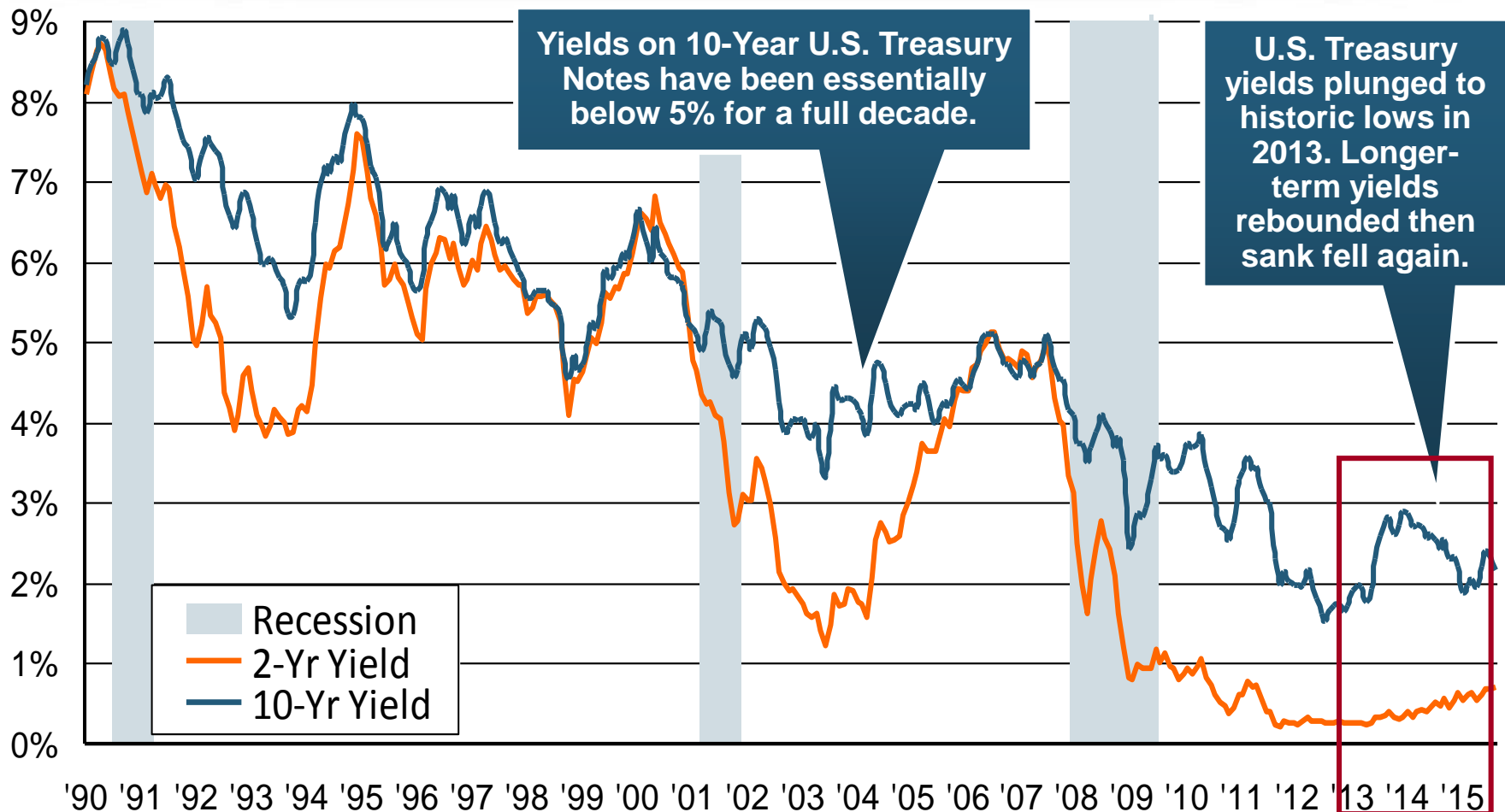
# Distribution of Invested Assets: P/C Insurance Industry, 2013

**\$ Billions**





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



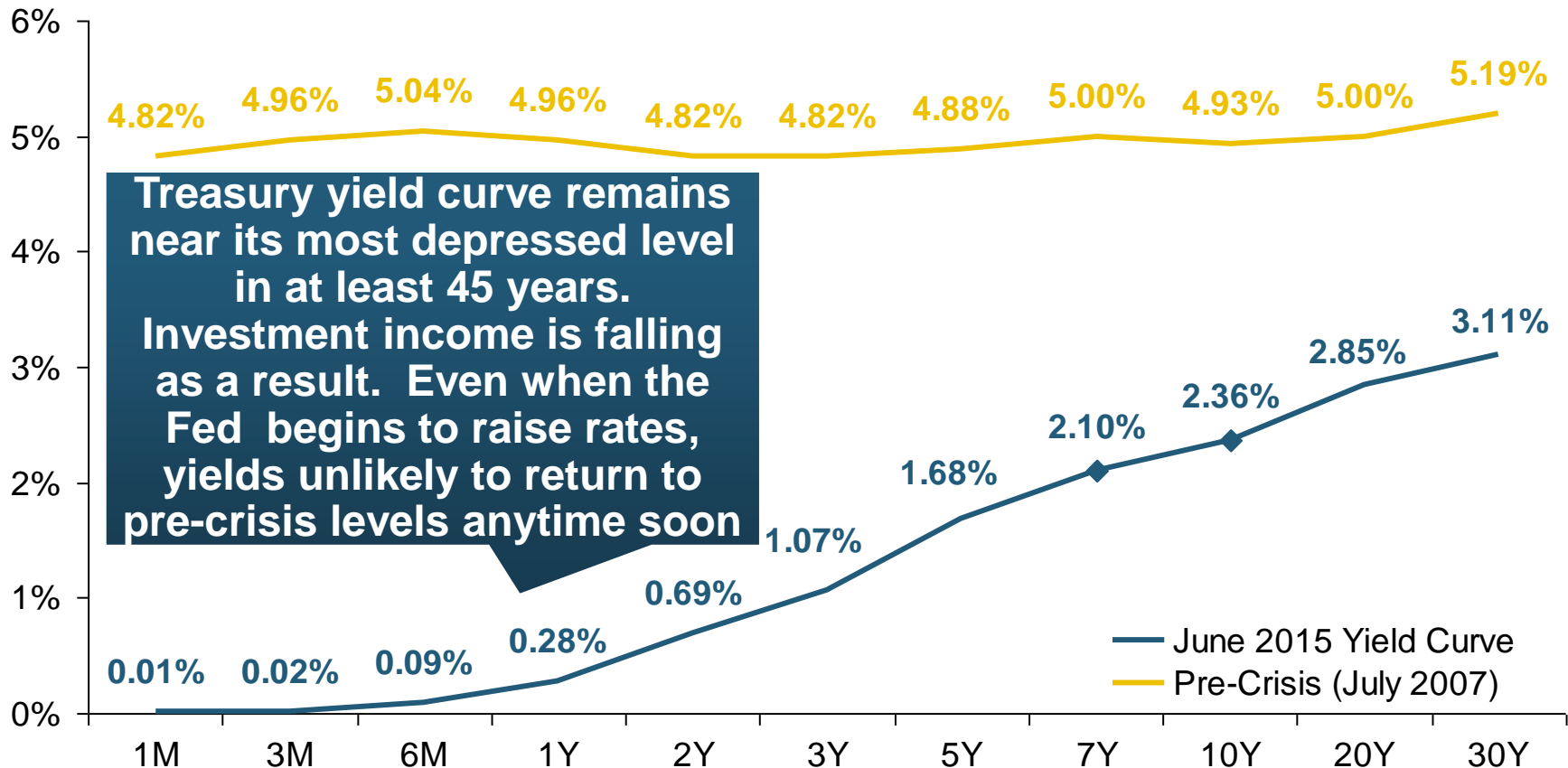
**Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, most P/C insurer portfolios will have low-yielding bonds for years to come.**

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

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



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

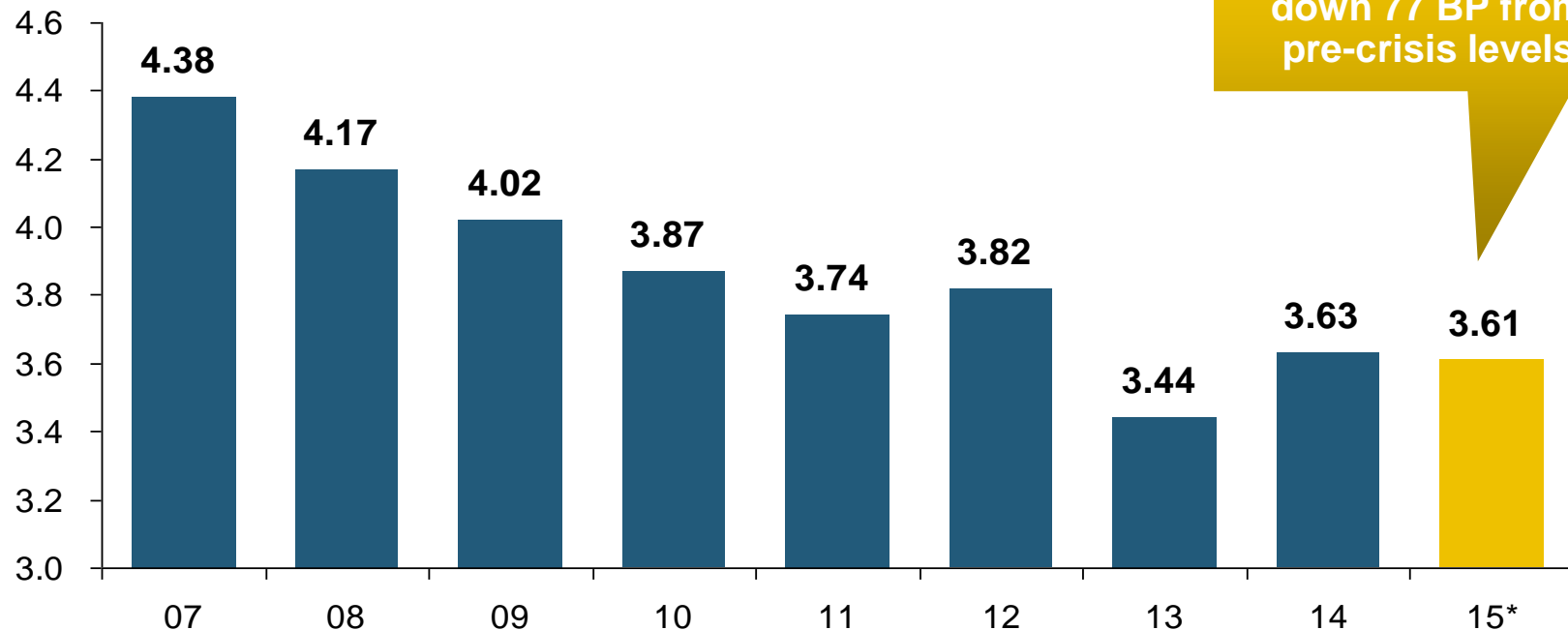


**The Fed Is Actively Signaling that it Is Likely to Begin Raising Rates Later in 2015 but Only Very Gradually**



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

(Percent)



Book yield in 2015 is down 77 BP from pre-crisis levels

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.

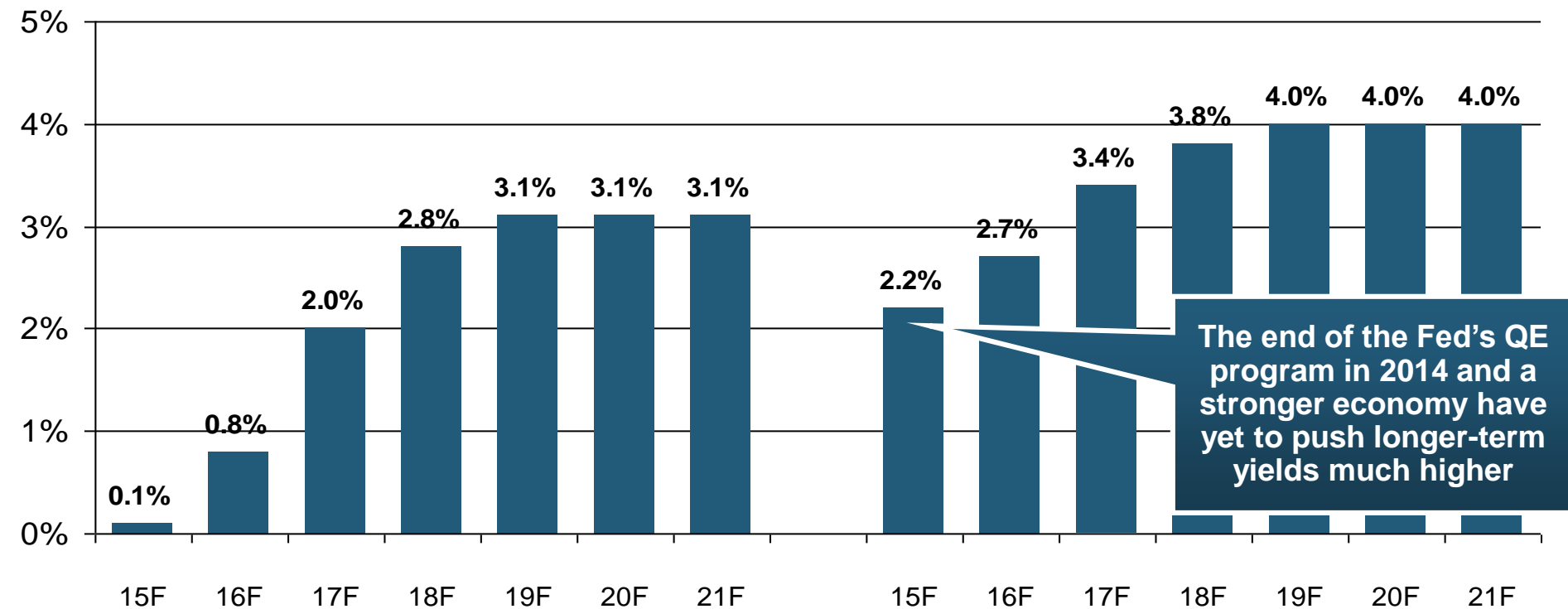


# Interest Rate Forecasts: 2015 – 2021

Yield (%)

## 3-Month Treasury

## 10-Year Treasury



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



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

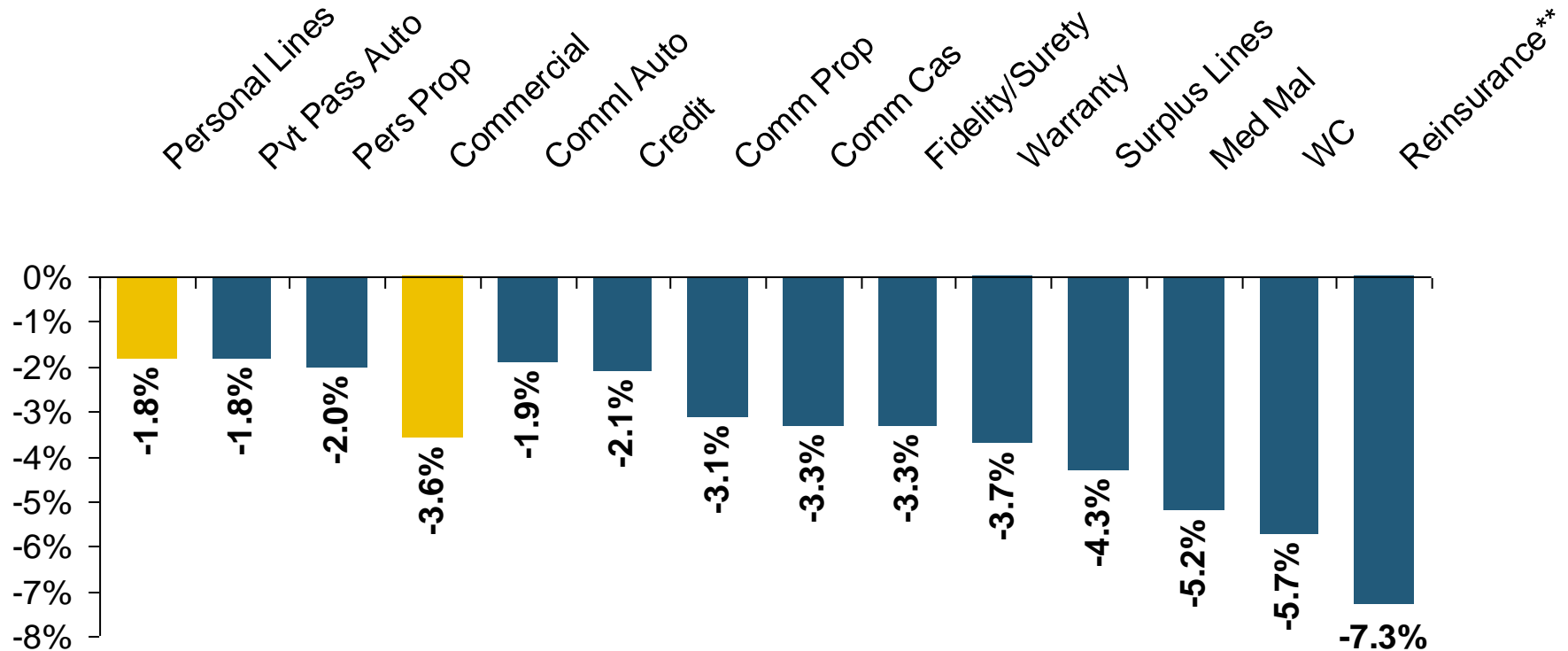
## Annual Inflation Rates (%)



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



# 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**

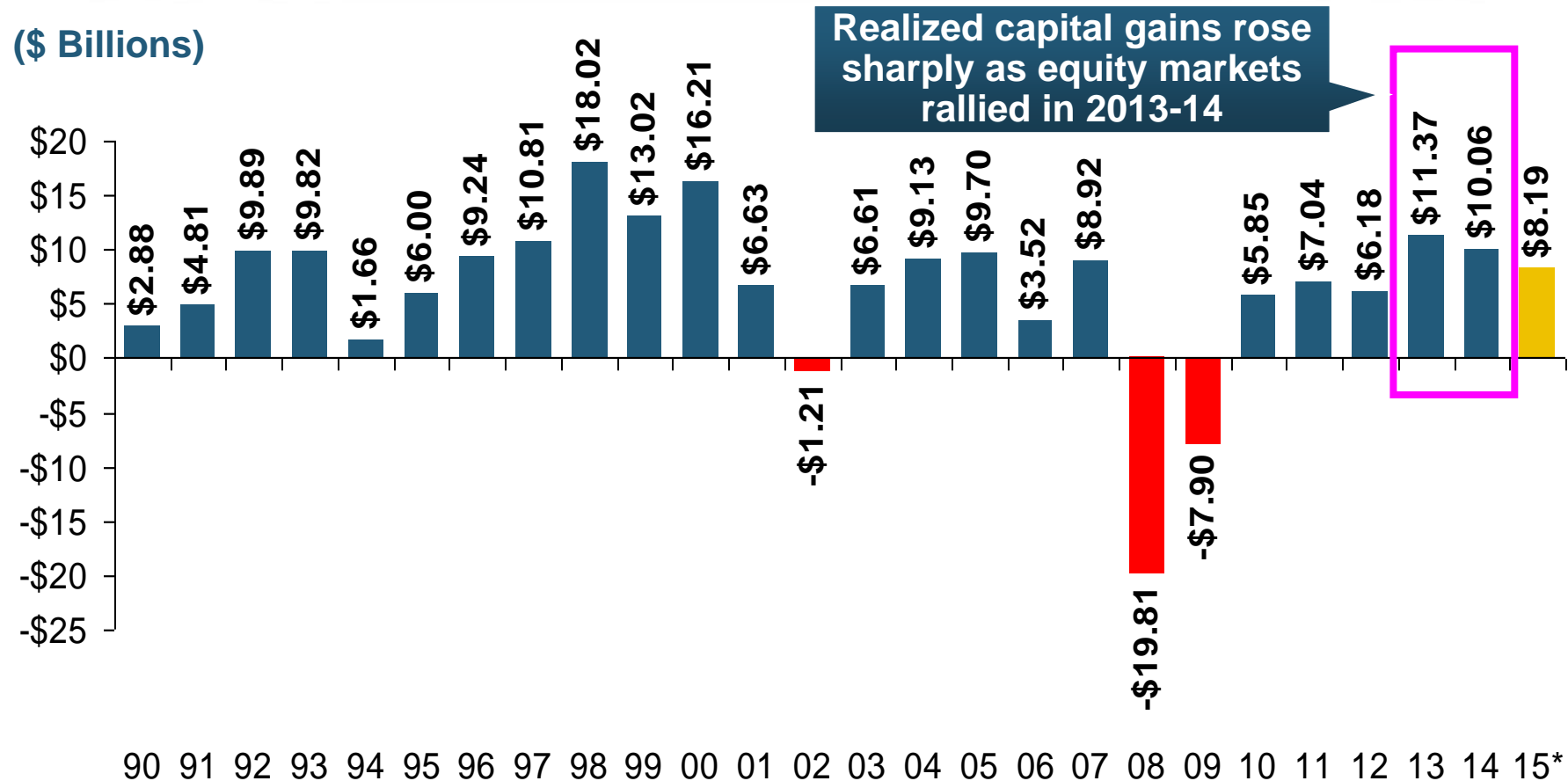
\*Based on 2008 Invested Assets and Earned Premiums

\*\*US domestic reinsurance only

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



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



**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.**

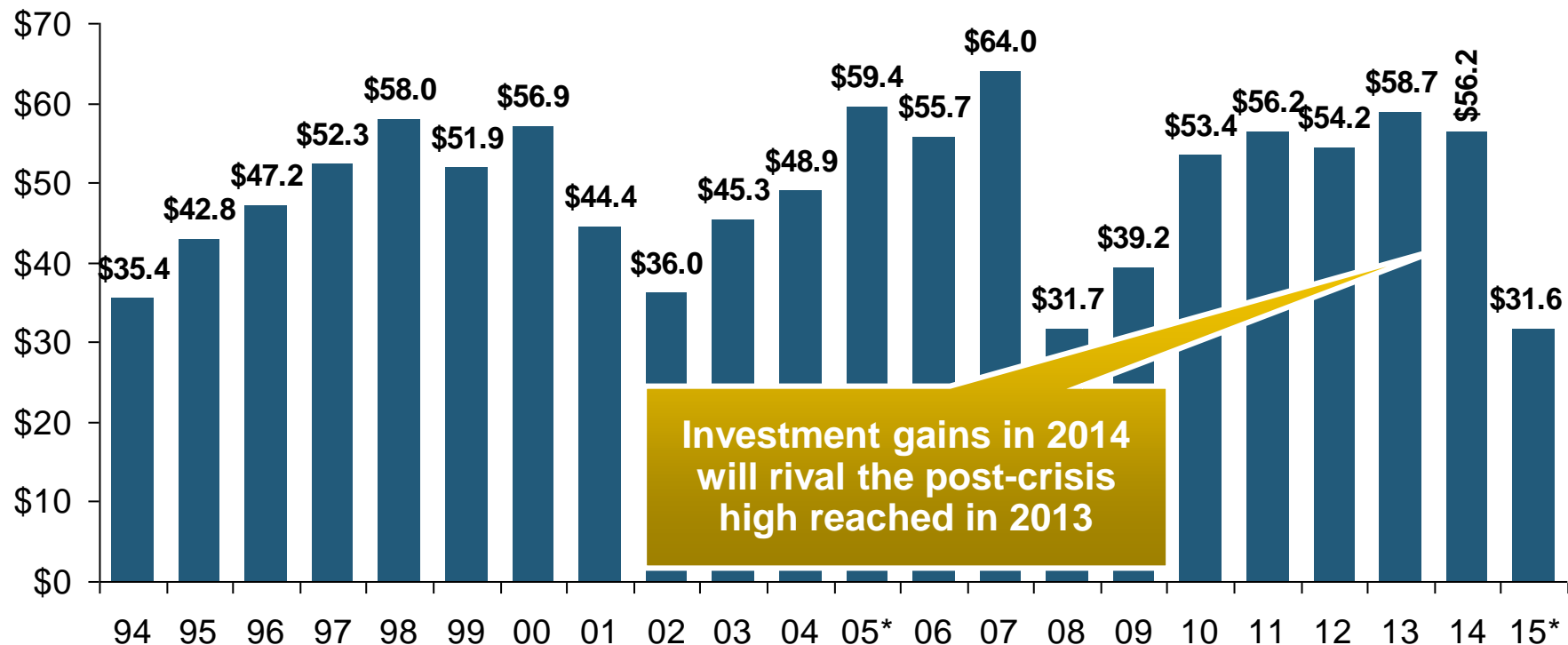
\*Through Q2 2015.

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



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

(\$ Billions)



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

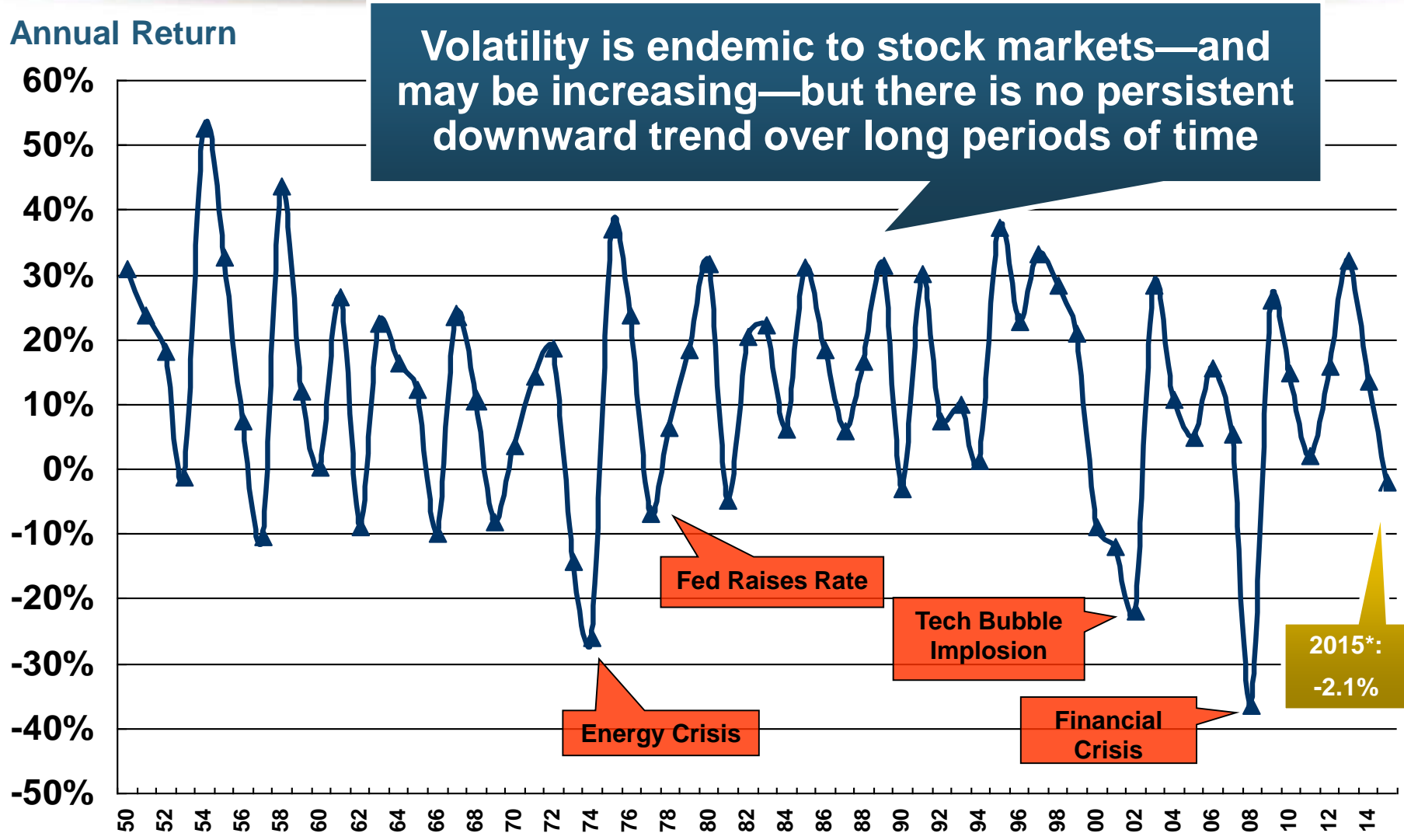
<sup>1</sup> Investment gains consist primarily of interest, stock dividends and realized capital gains and losses.

\* 2005 figure includes special one-time dividend of \$3.2B; 2015 figure is through Q2 2015.

Sources: ISO, SNL; Insurance Information Institute.



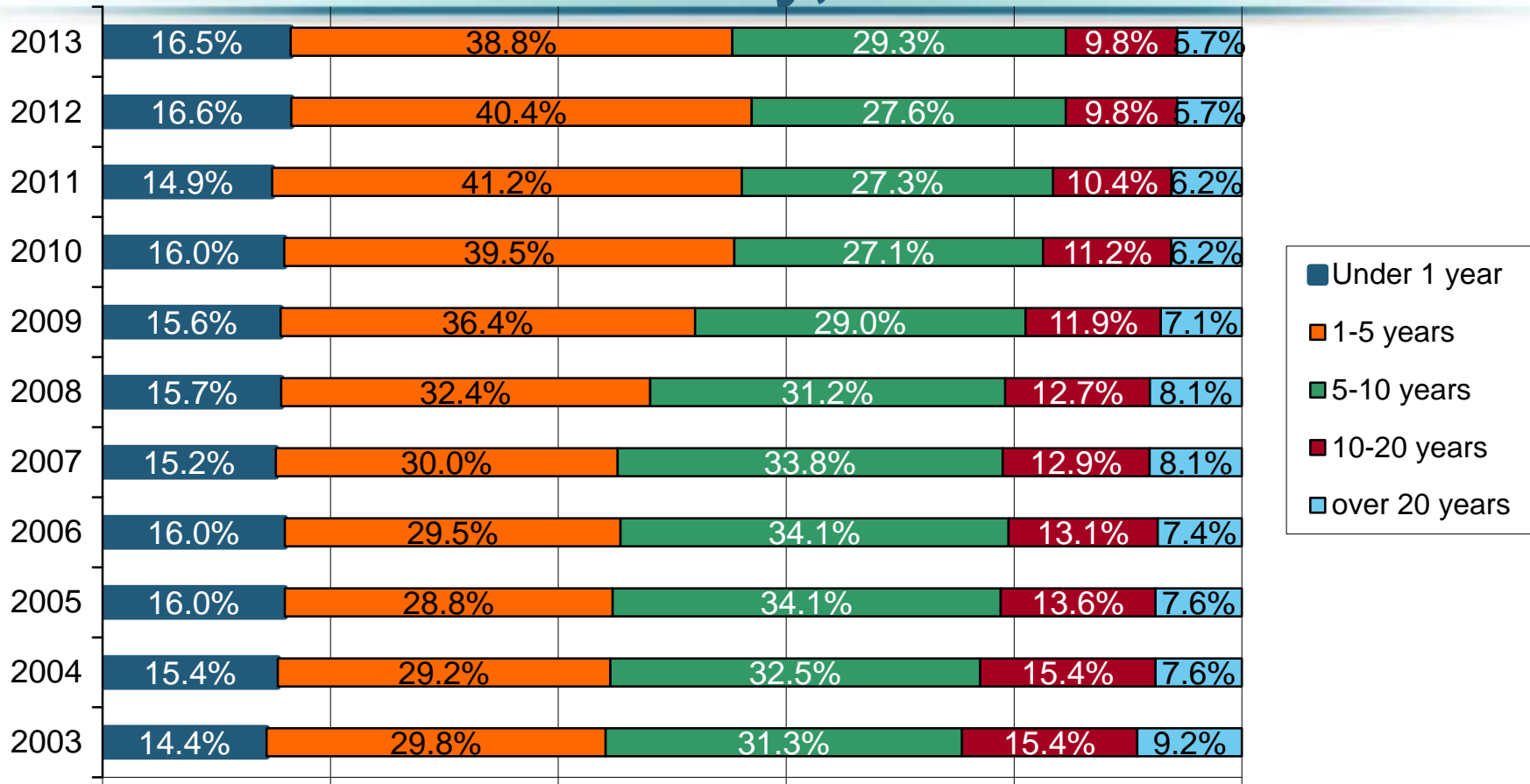
# S&P 500 Index Returns, 1950 – 2015\*



\*Through Oct. 9, 2015.  
Source: NYU Stern School of Business: [http://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/datafile/histretSP.html](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.



# CAPITAL/CAPACITY

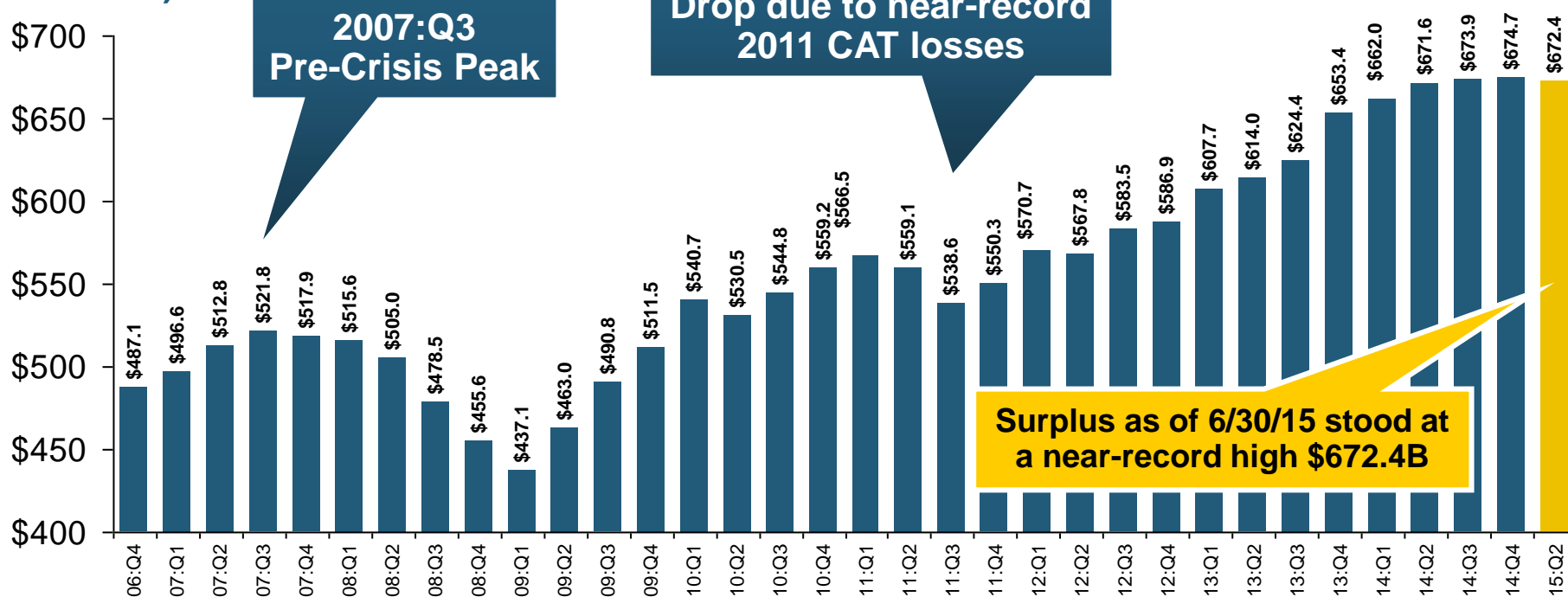
**Capital Accumulation Has  
Multiple Impacts**

***Alternative Capital Impacts?***



# Policyholder Surplus, 2006:Q4–2015:Q2

(\$ Billions)



**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.

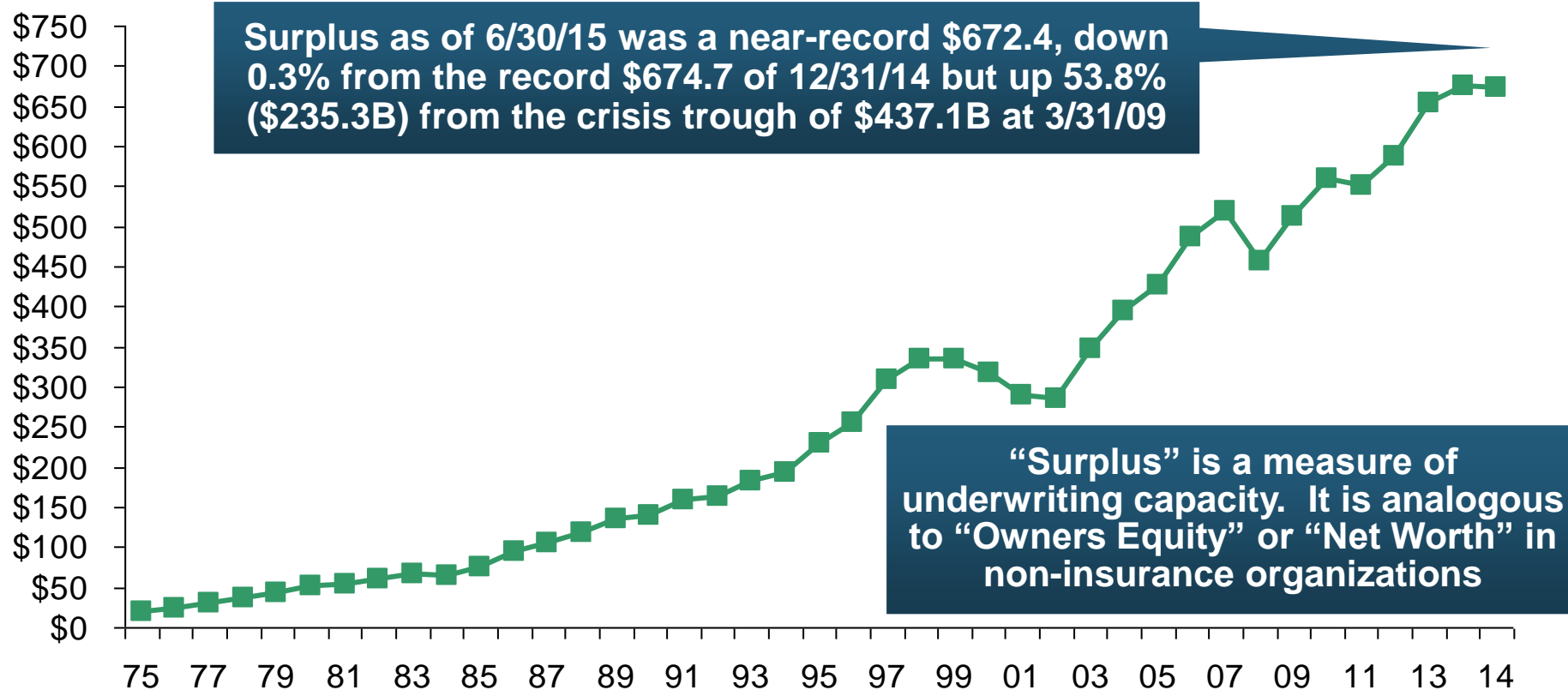
Sources: ISO, A.M. Best.

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



# 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)**

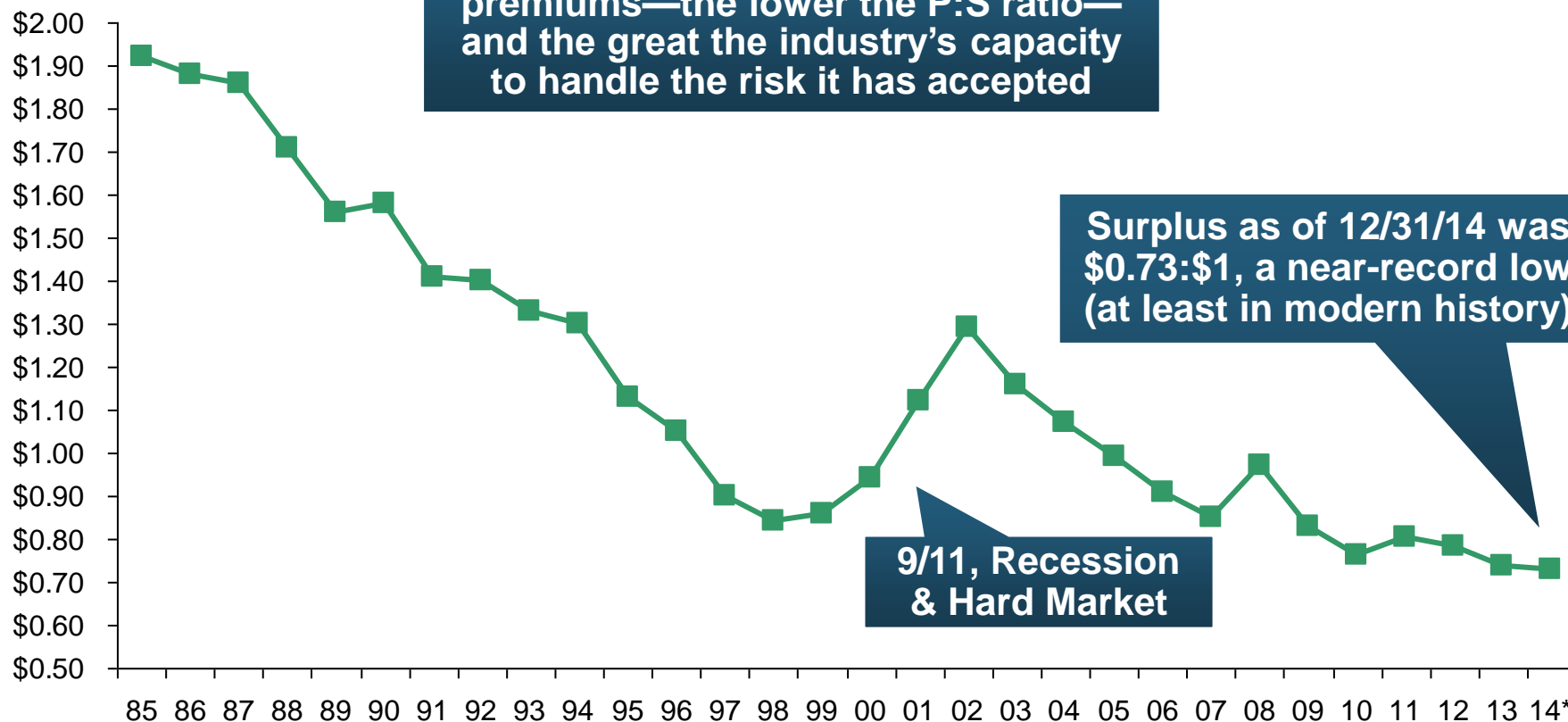
\*As of 6/30/15.

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



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

(Ratio of NWP to PHS)



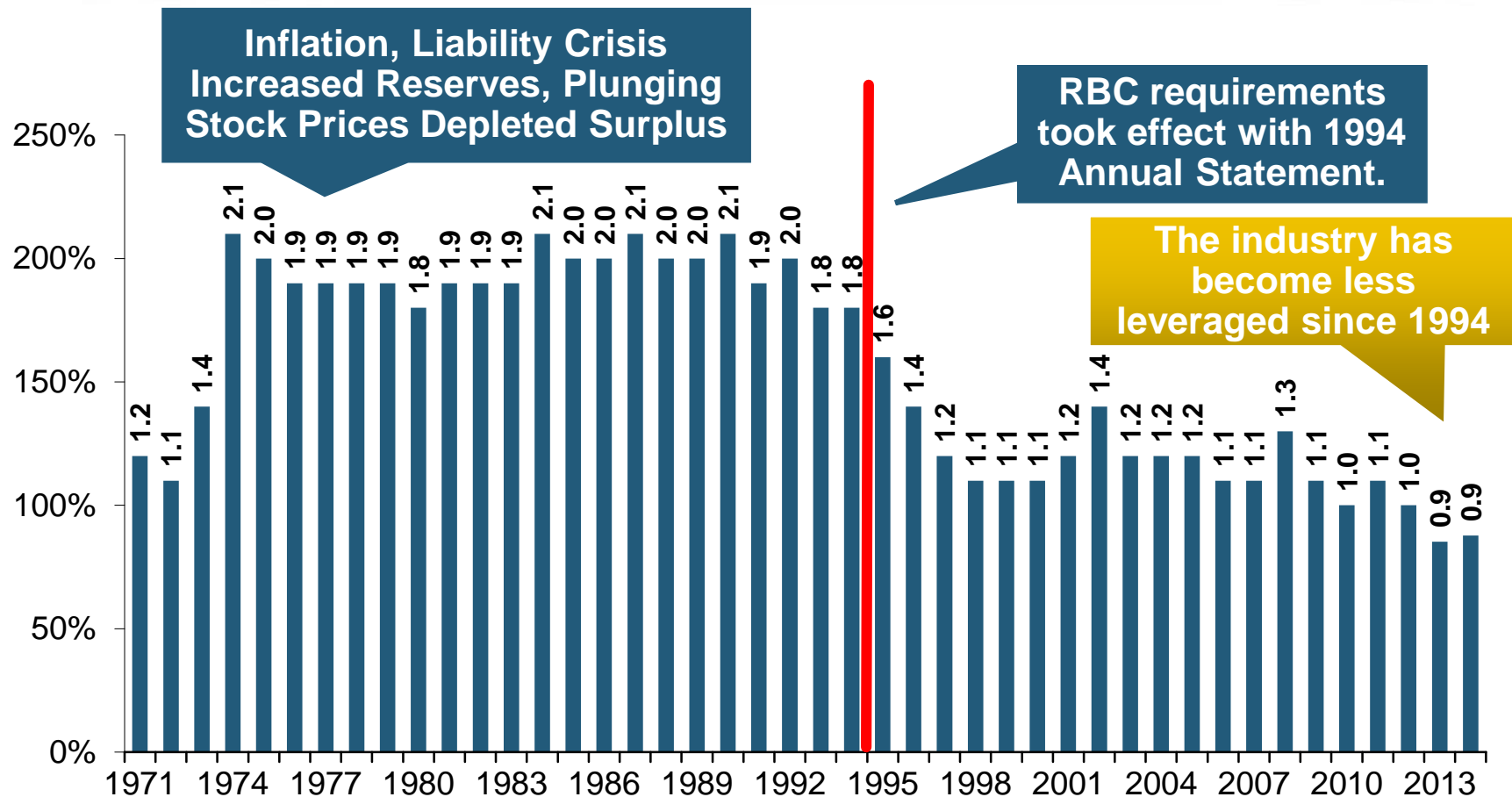
**The Premium-to-Surplus Ratio Stood at \$0.73:\$1 as of  
12/31/14, a Record Low (at Least in Recent History)**

\* As of 12/31/14.

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



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



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



# 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.



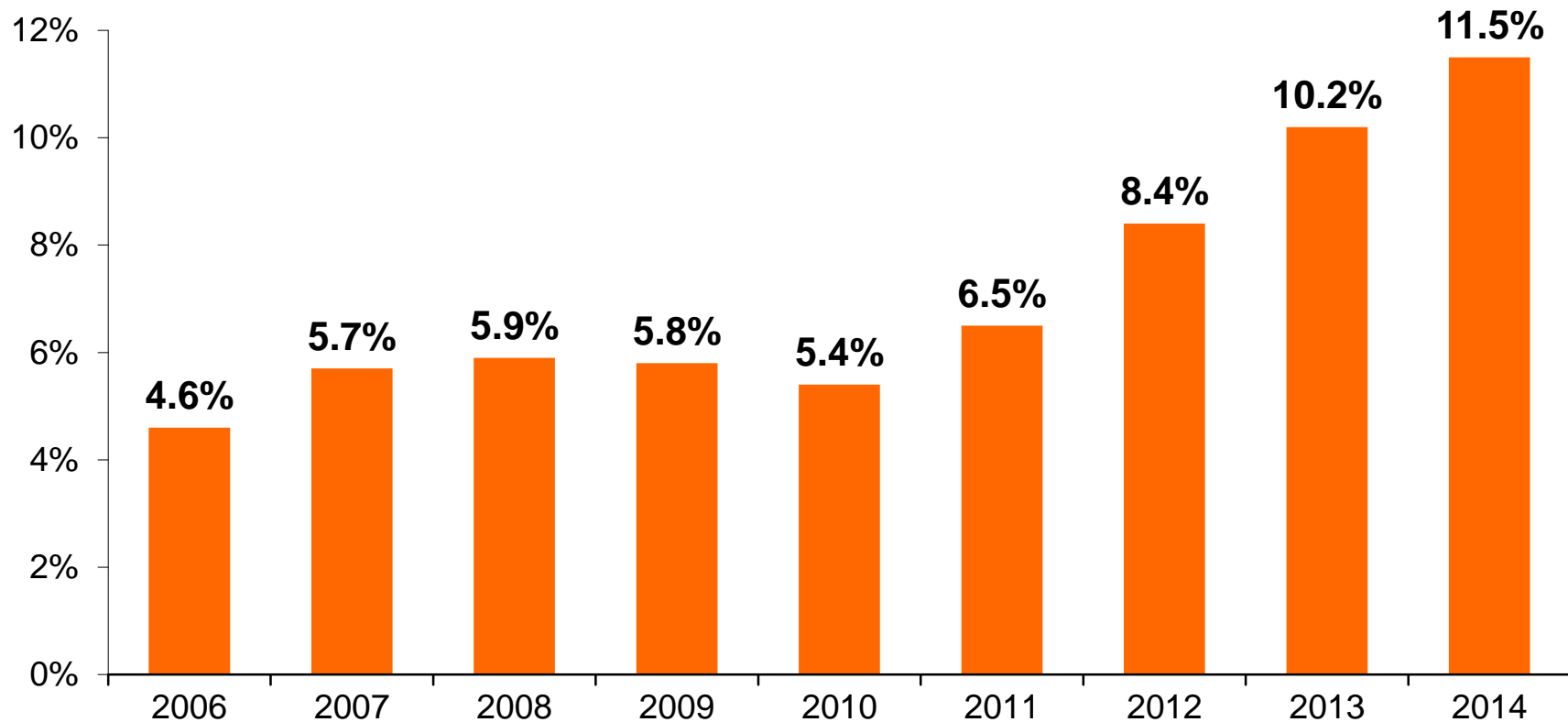
**But alternative capacity has grown 210% since 2008, to \$50B. It has more than doubled in the past three years.**

2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.



# Alternative Capital as a Percentage of Traditional Global Reinsurance Capital



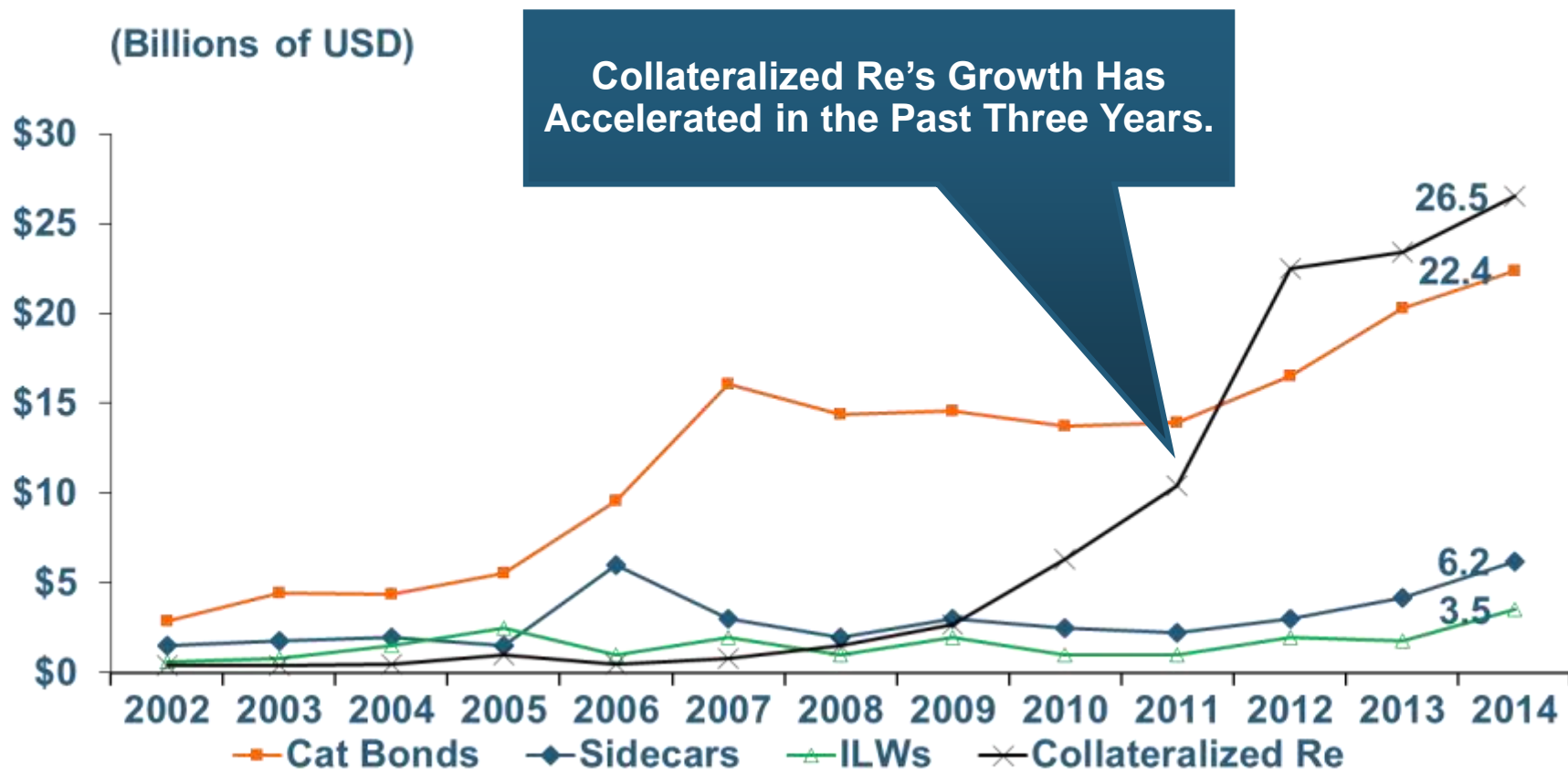
**Alternative Capital's Share of Global Reinsurance Capital Has More Than Doubled Since 2010.**

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.**

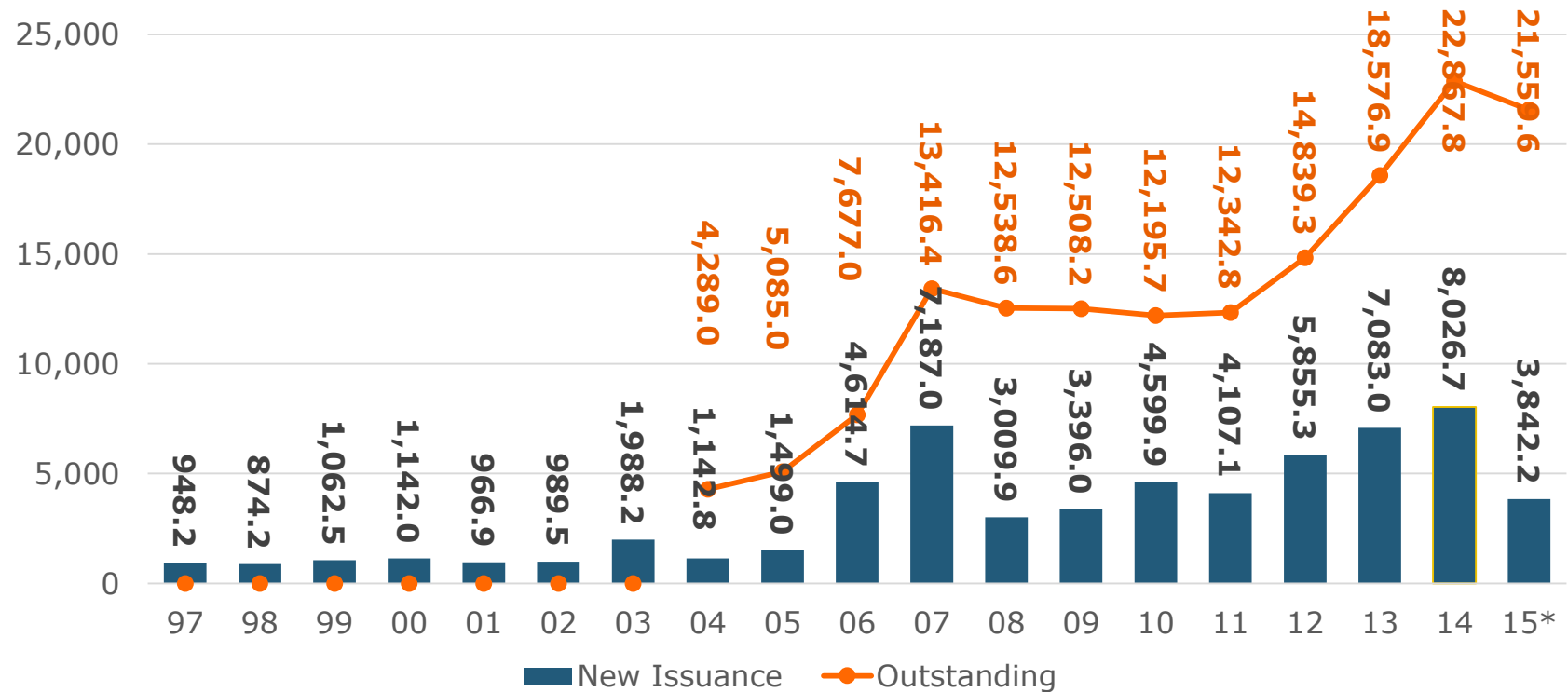
2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.



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

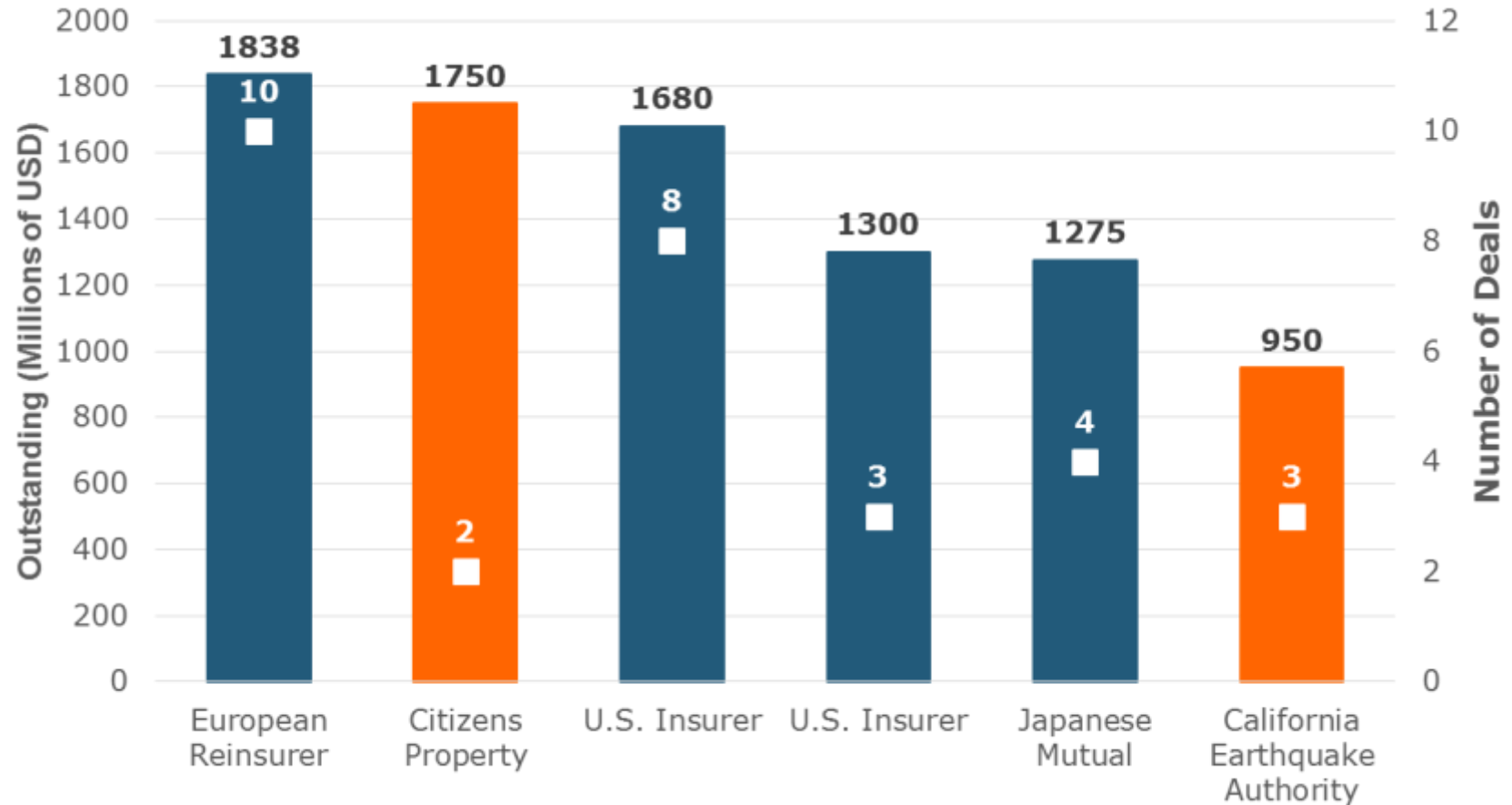
Risk Capital Amount (\$ Millions)



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



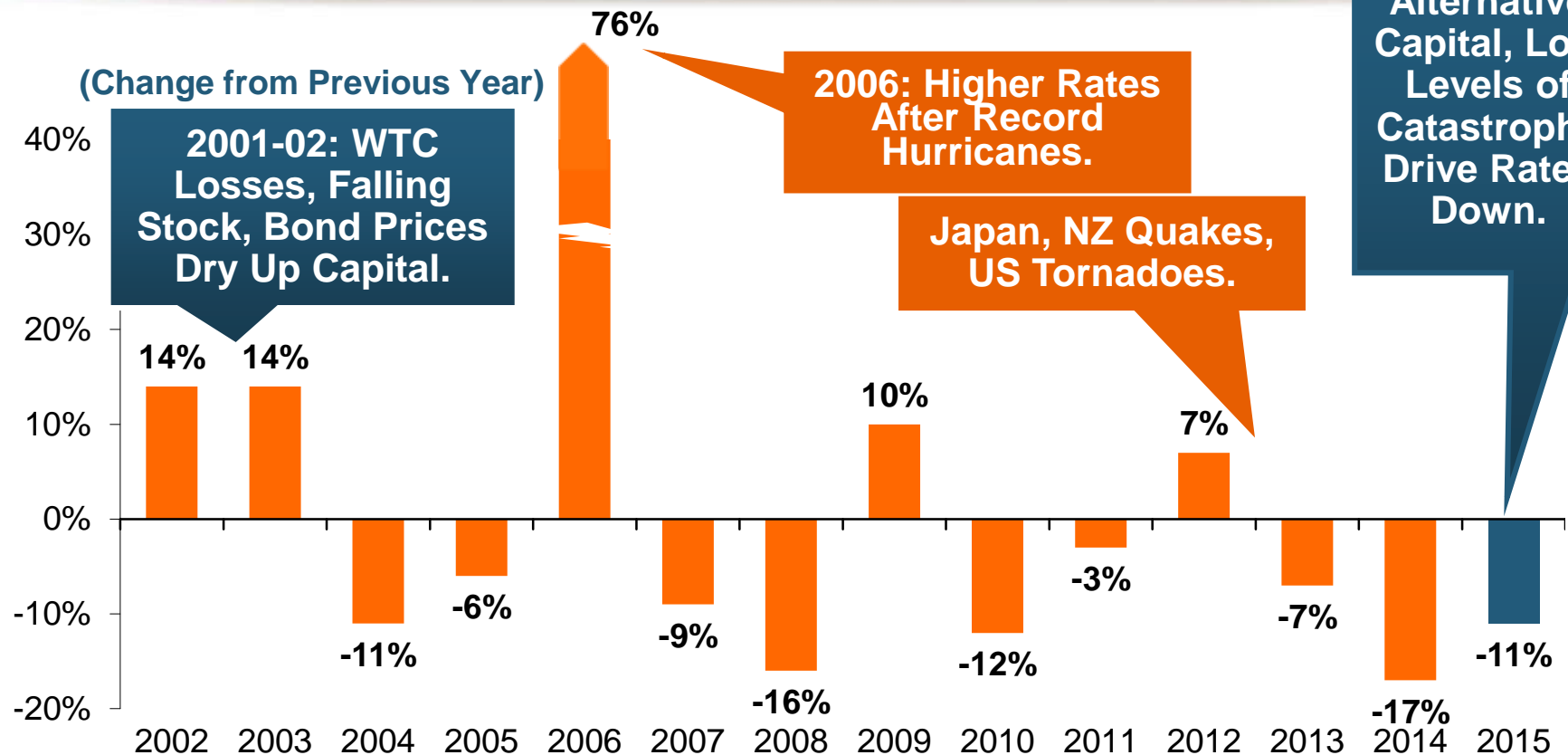
# Largest Sponsors of ILS, Year-End 2014



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



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



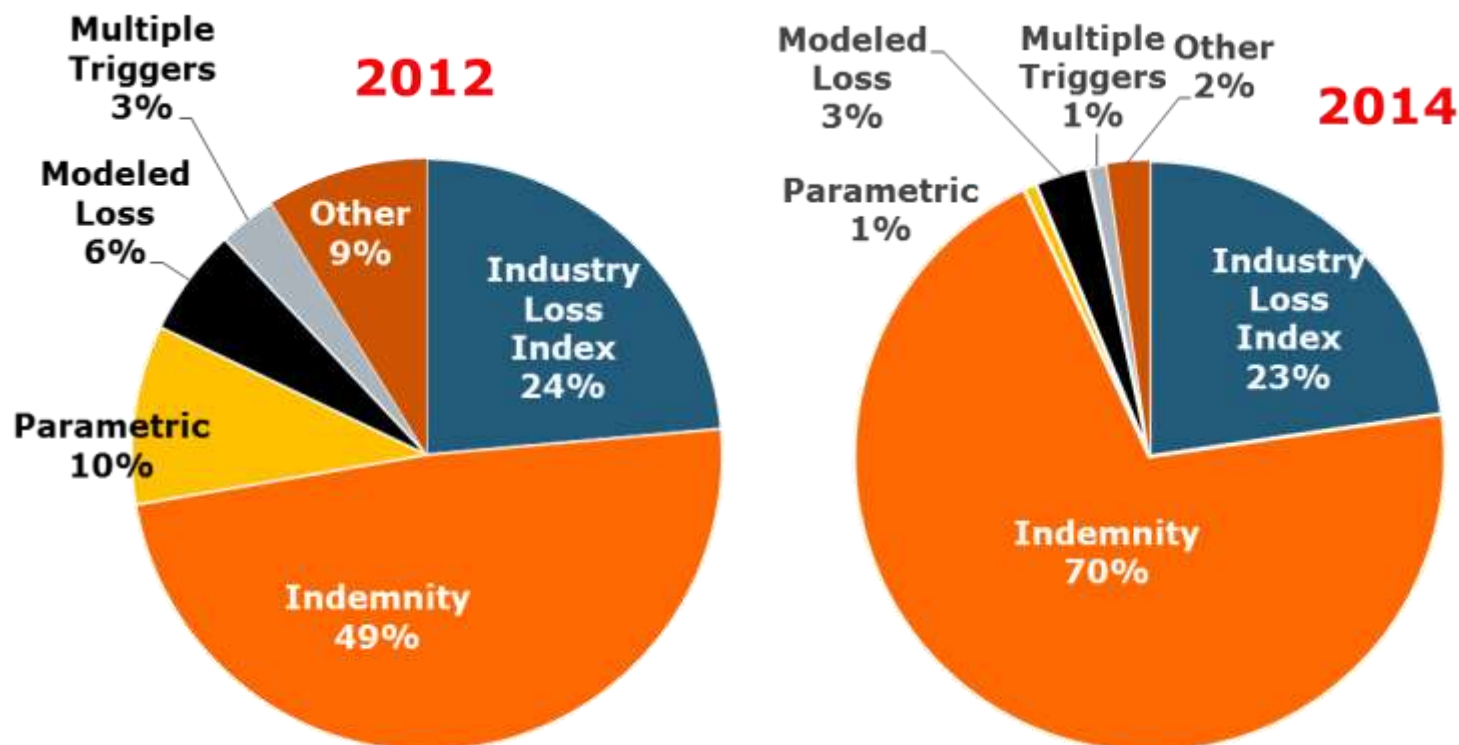
**Catastrophe Prices Fell 11 Percent on January 1 Renewals, Driven by Emergence of New Capital, Mild Catastrophe Losses.**

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).**



# 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?**

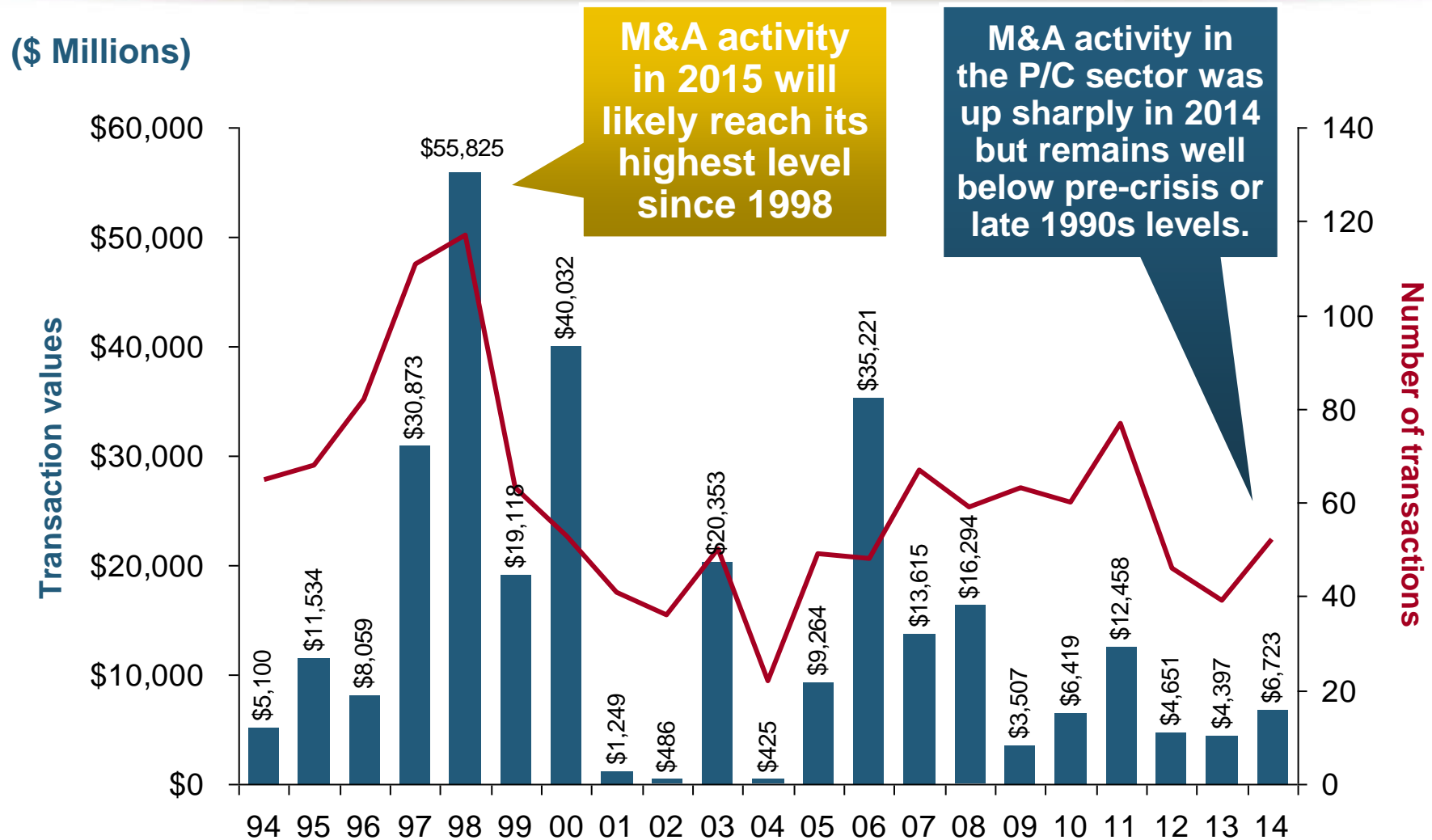


## **4. M&A UPDATE: *A PATH TO GROWTH?***

**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
<b>ACE (Switzerland)</b>	<b>Chubb (US)</b>	<b>\$28,300</b>
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
Desjardins Financial Corp. (Canada)	State Farm's property/casualty and life insurance 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
Mapfre S.A. (Spain)	German and Italiana operations of Direct Line 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

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	Canopus	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”



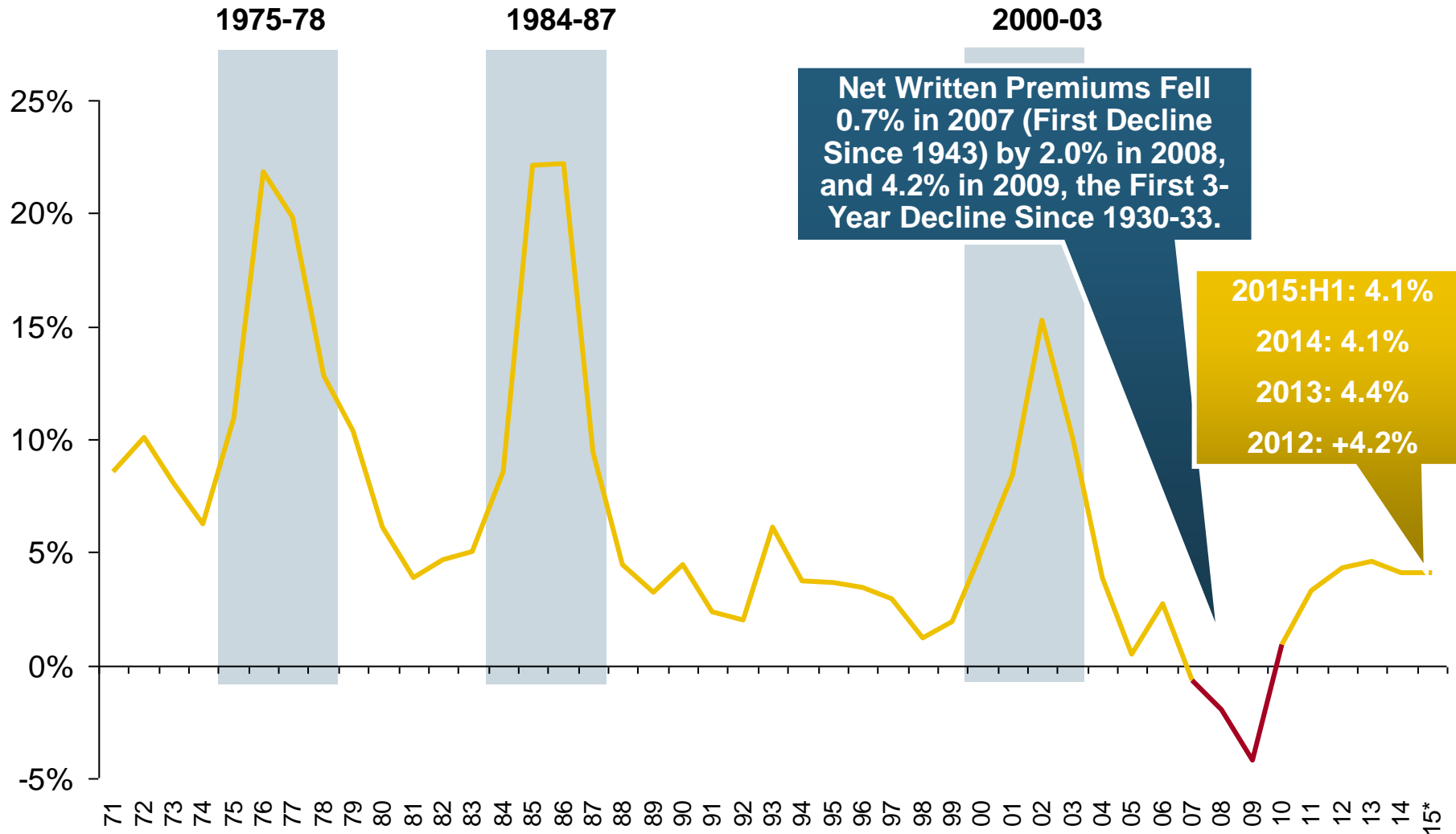
# Growth

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



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

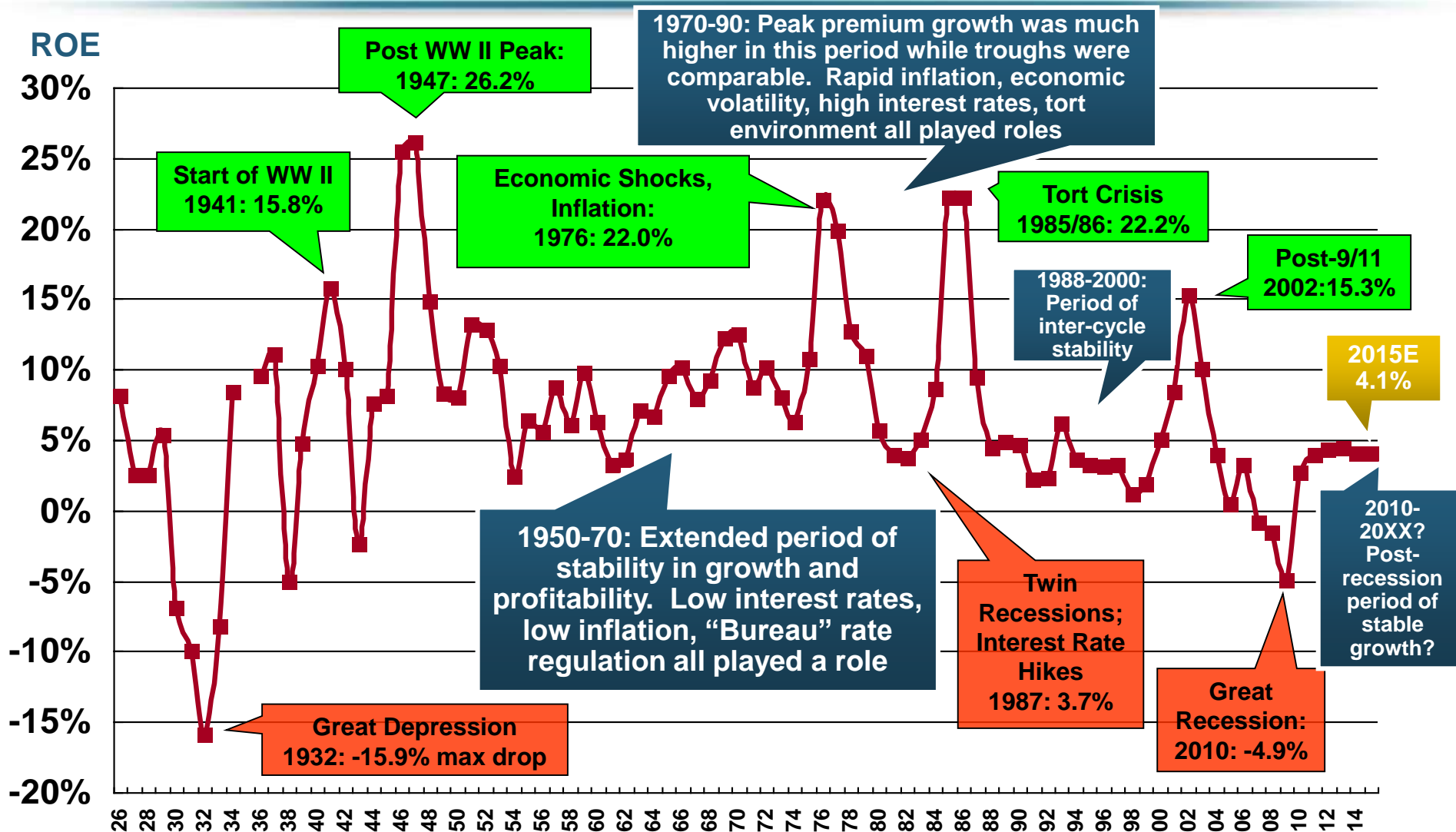
(Percent)



Shaded areas denote "hard market" periods  
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.

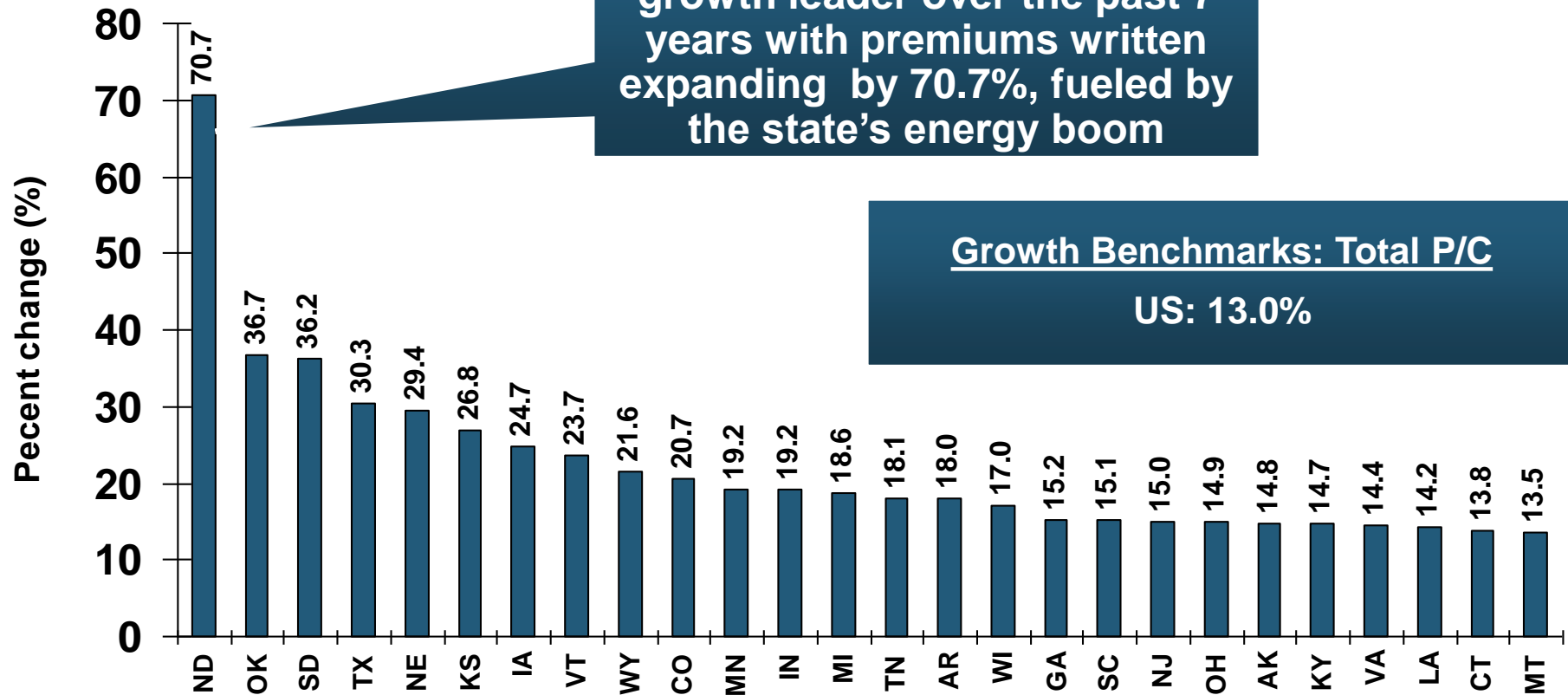
Source: A.M. Best; Insurance Information Institute.



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

## Top 25 States

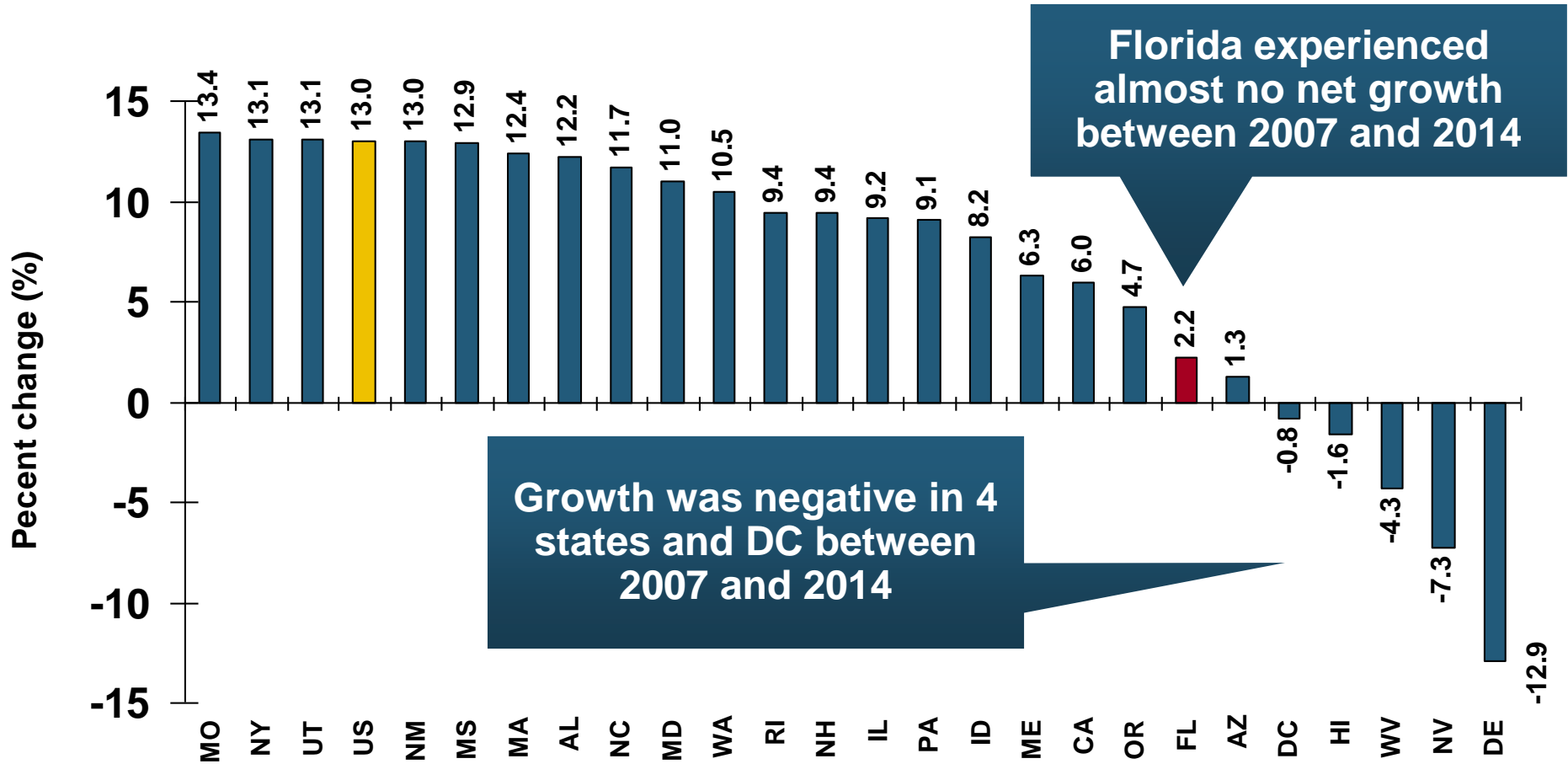
North Dakota was the country's growth leader over the past 7 years with premiums written expanding by 70.7%, fueled by the state's energy boom





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

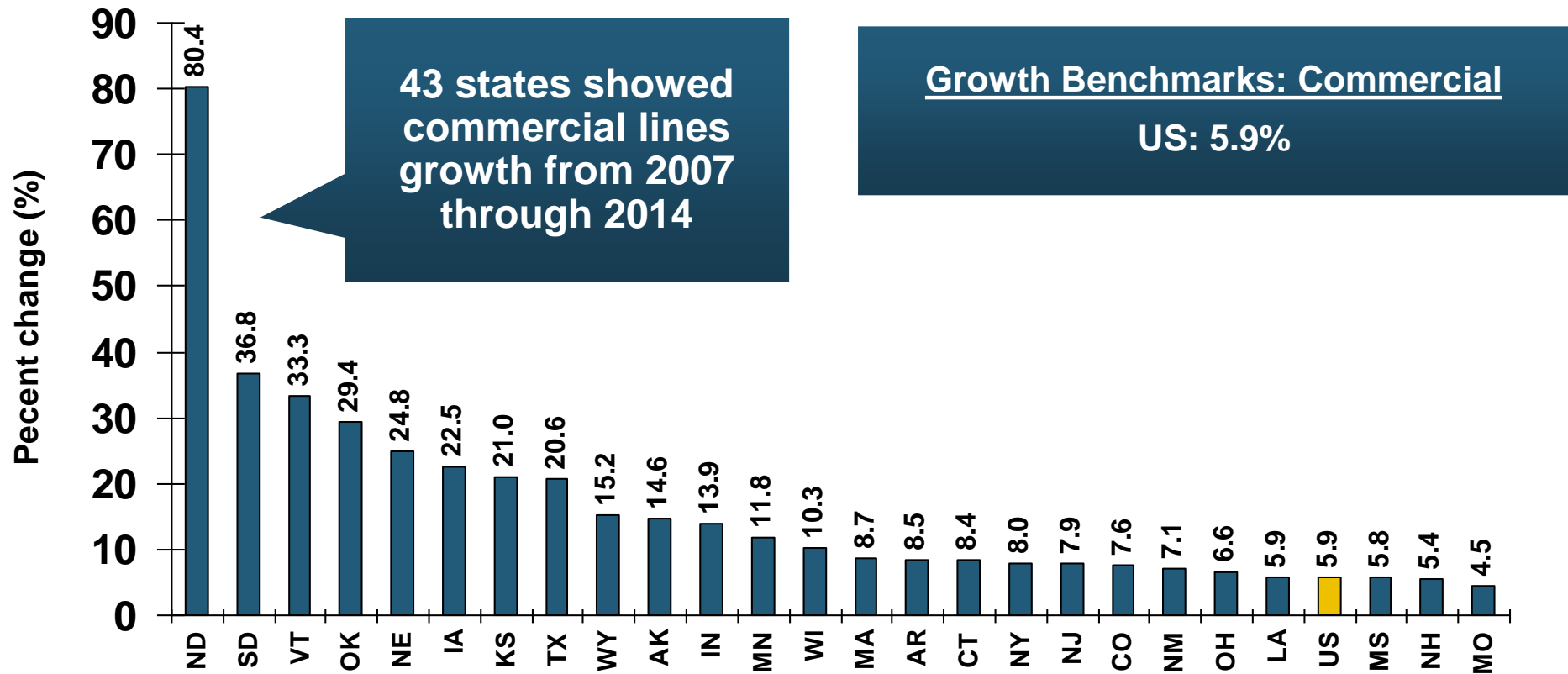
## Bottom 25 States





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

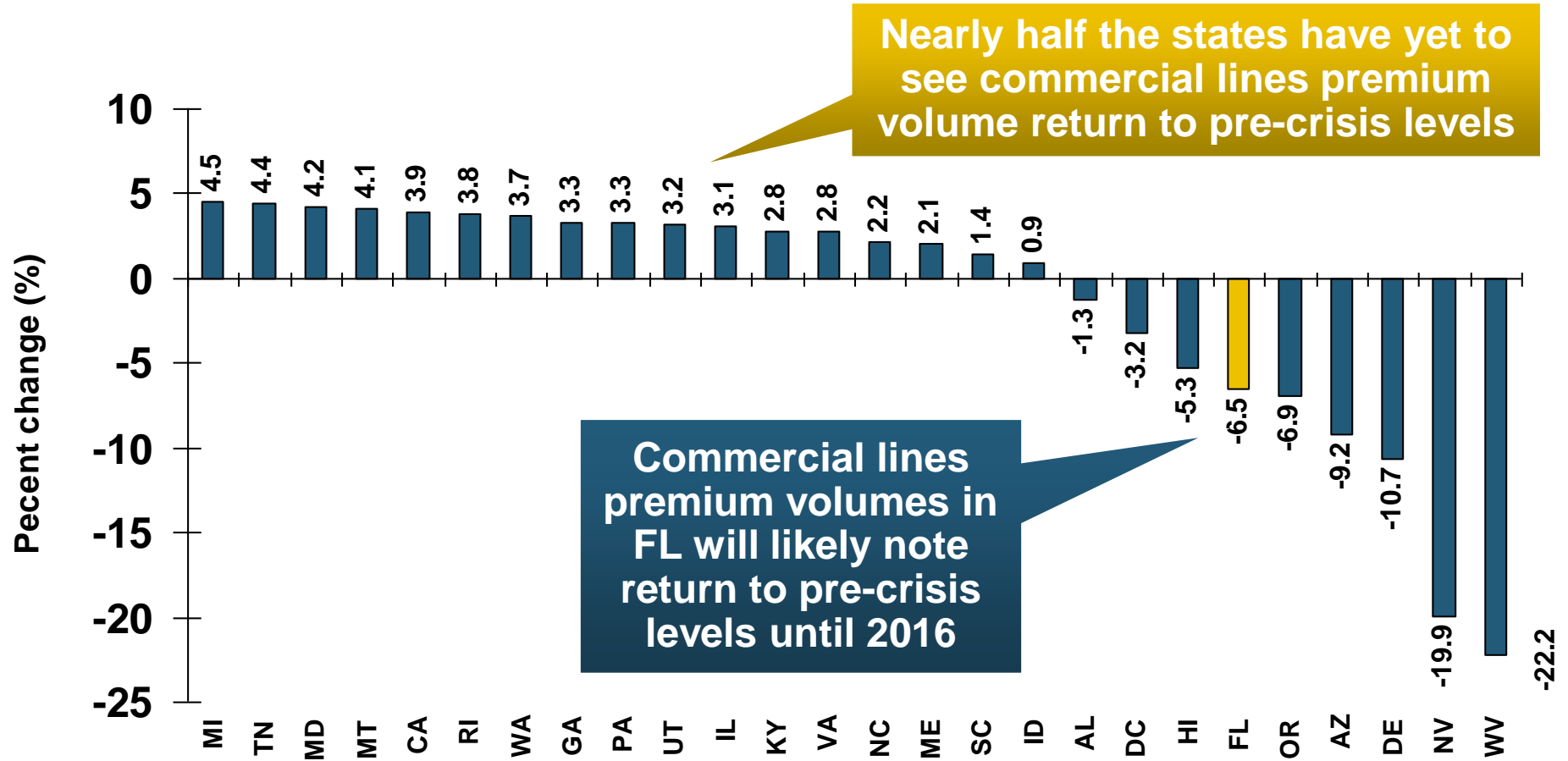
## Top 25 States





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

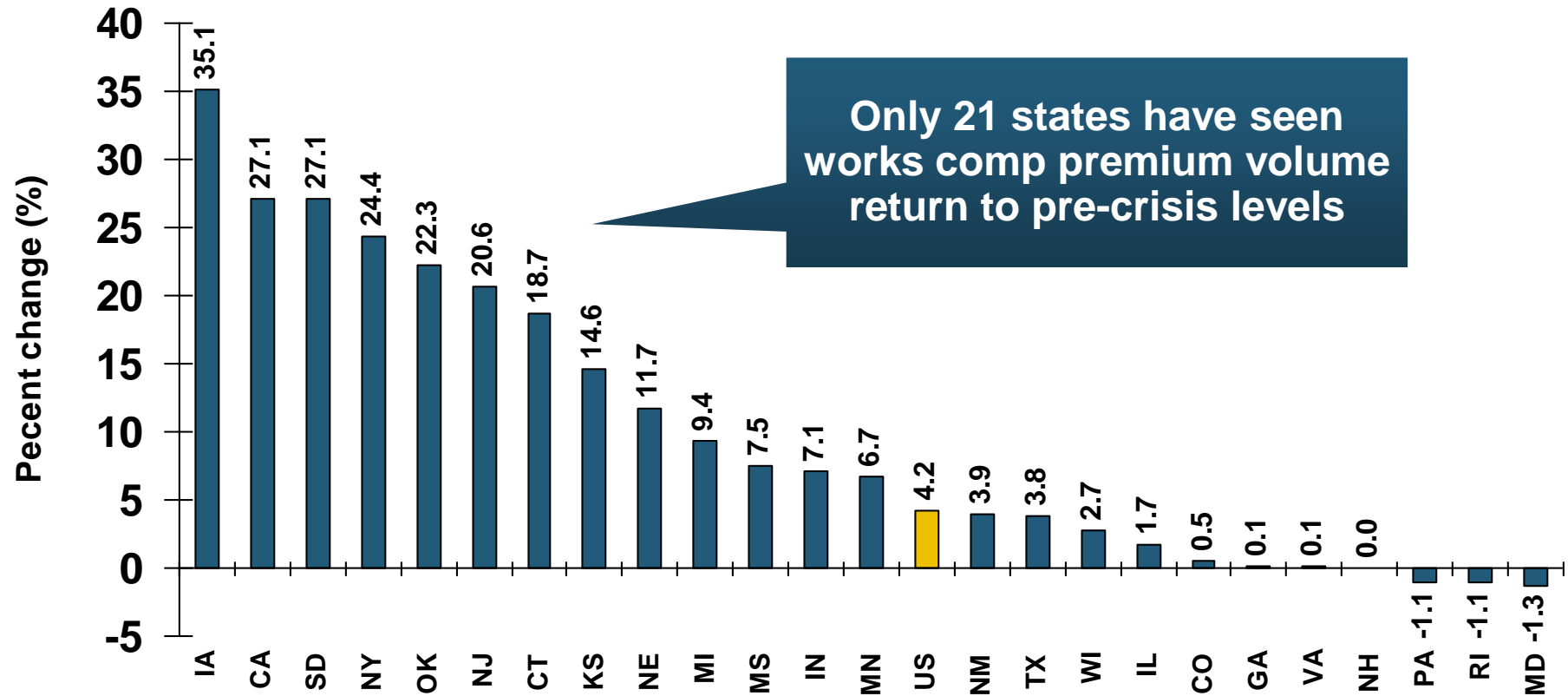
## Bottom 25 States





# Direct Premiums Written: Workers' Comp Percent Change by State, 2007-2014\*

## Top 25 States



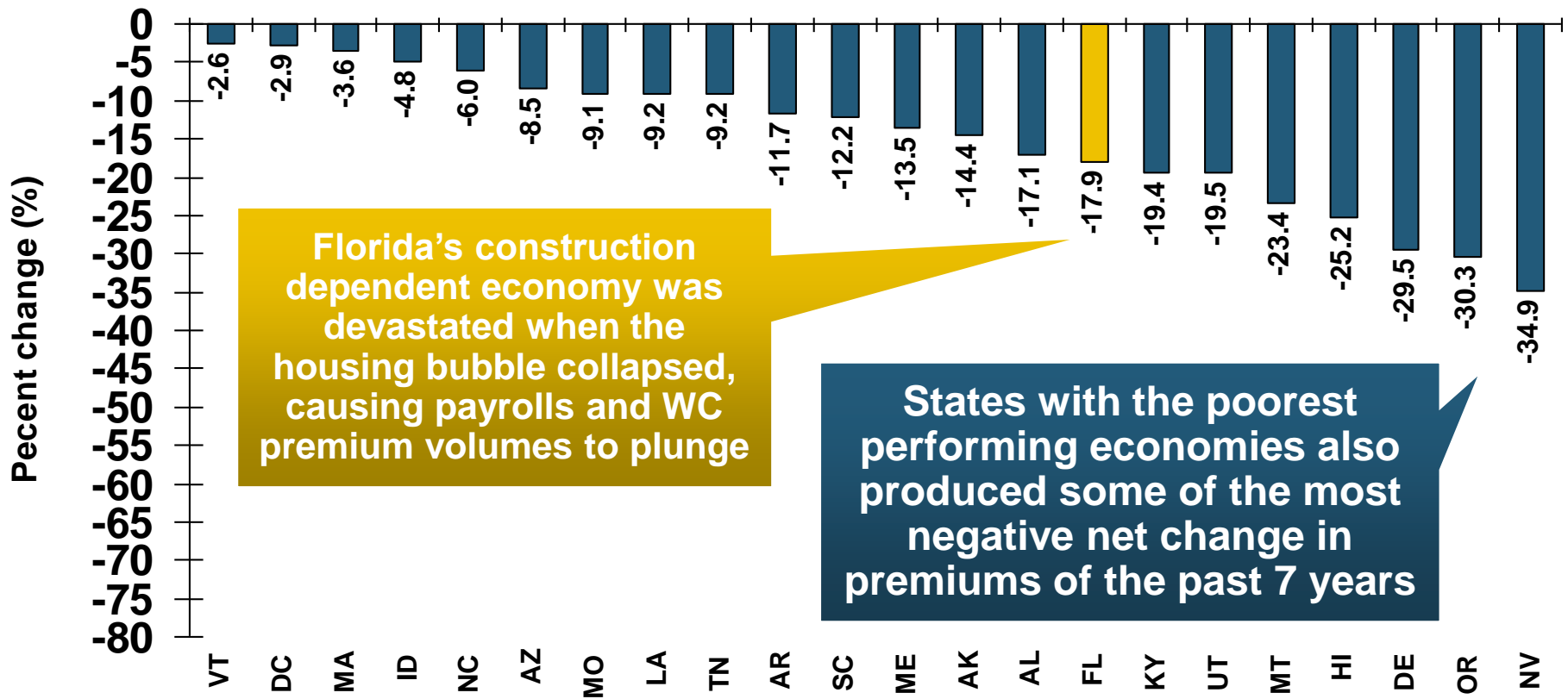
\*Excludes monopolistic fund states: ND, OH, WA, WY as well as WV, which transitioned to a competitive structure during this period.

Sources: SNL Financial LC.; Insurance Information Institute.



# Direct Premiums Written: Worker's Comp Percent Change by State, 2007-2014\*

## 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.

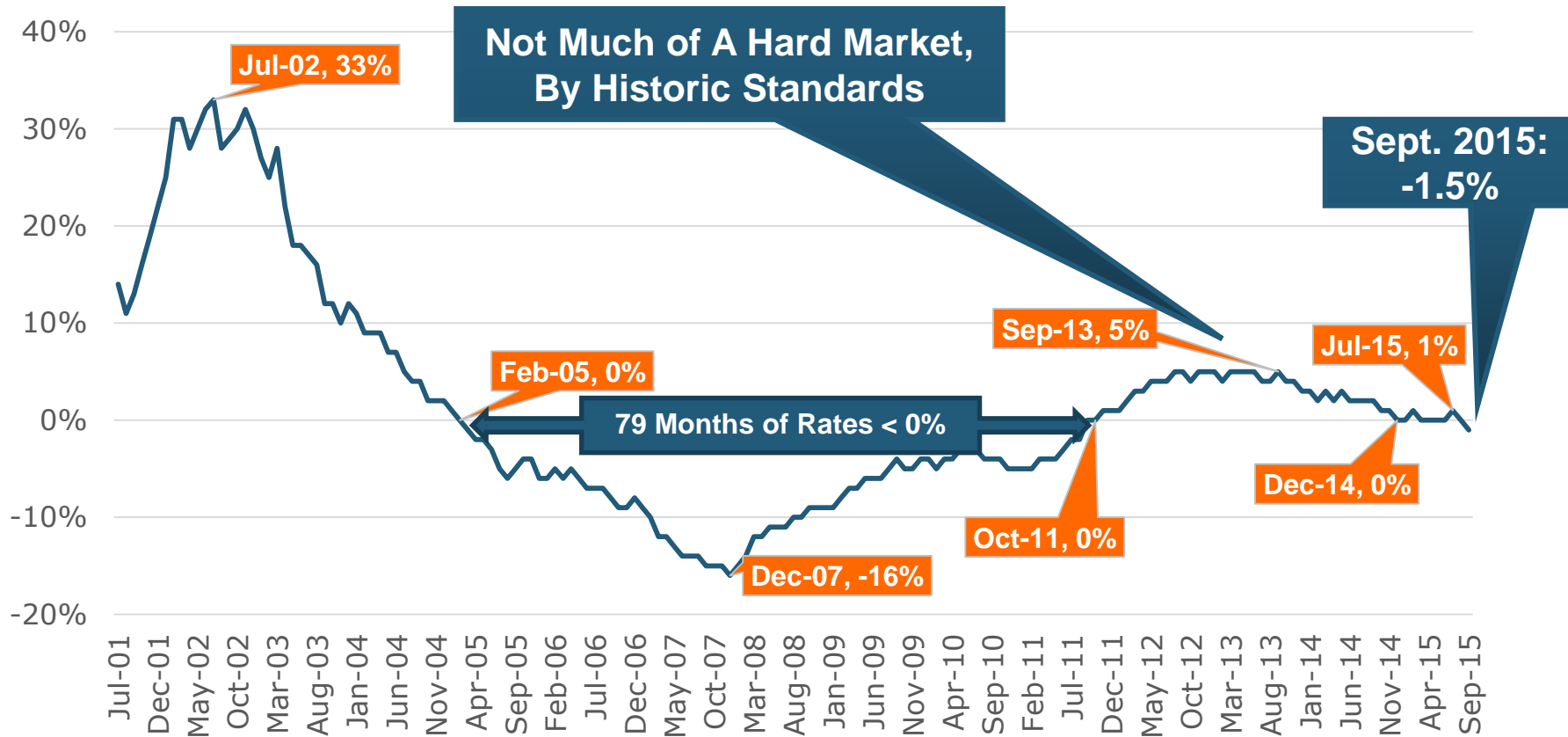


# Pricing Trends

**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

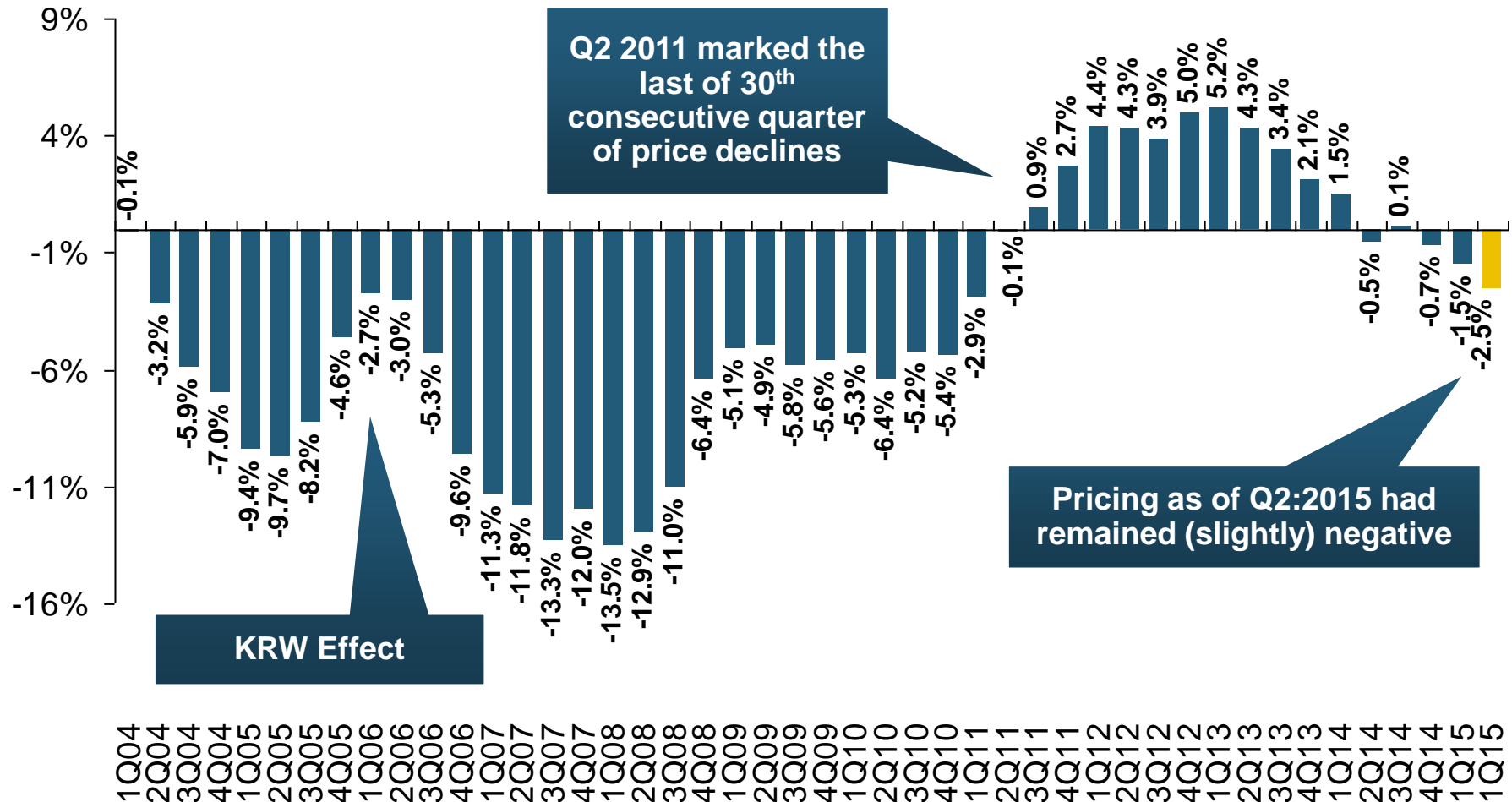


**Commercial Insurance Rate Changes Are Fairly Stable**



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

(Percent)

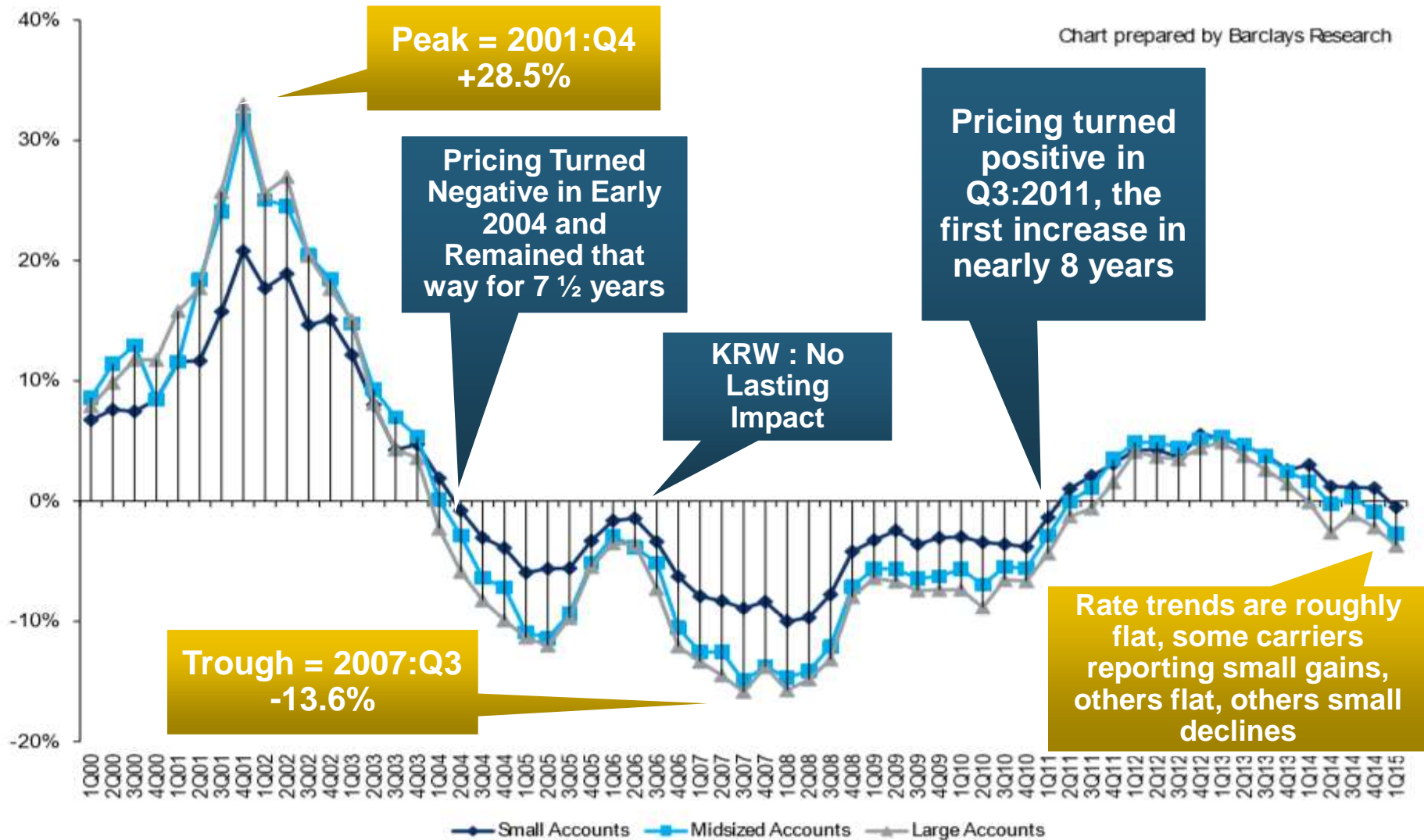


Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.  
Source: Council of Insurance Agents & Brokers; Insurance Information Institute



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

Percentage Change (%)

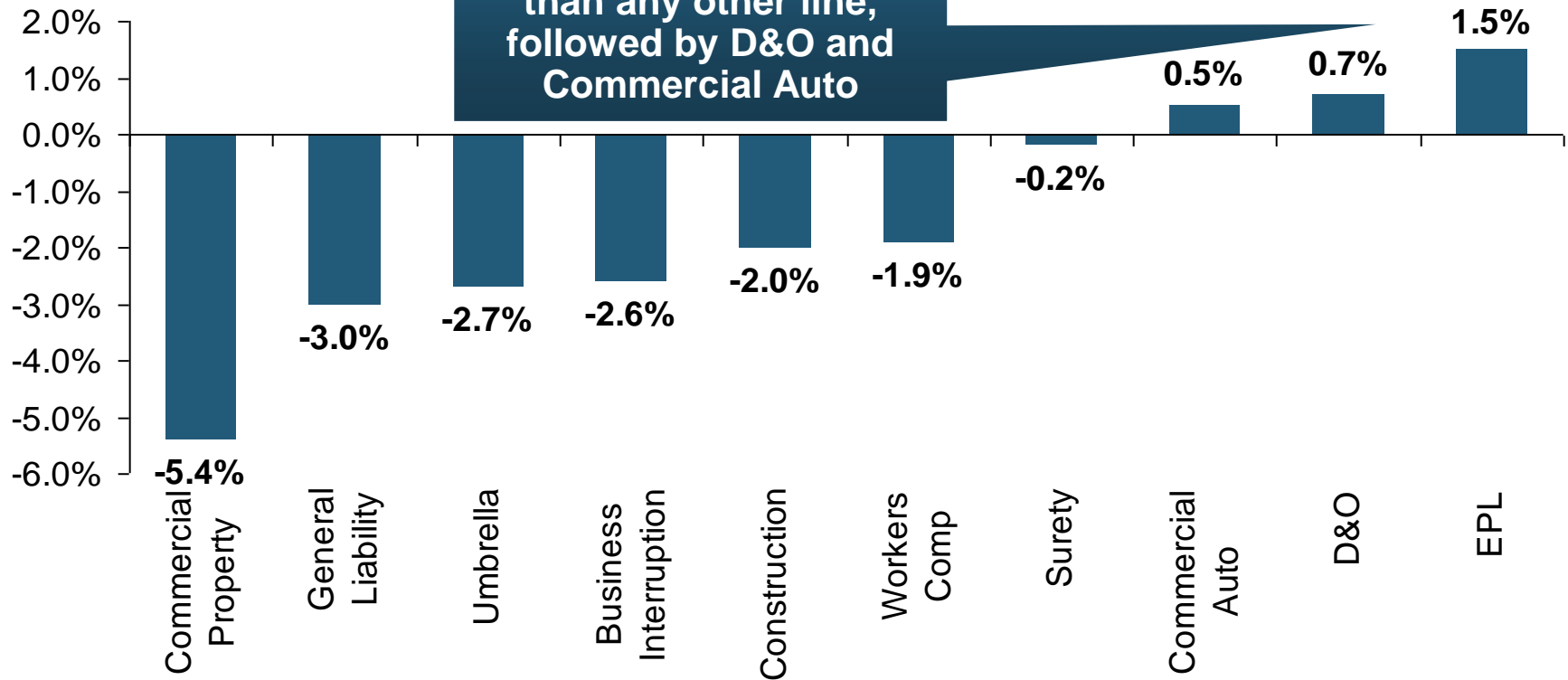


Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, *potentially substantially*.  
Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.



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

Percentage Change (%)



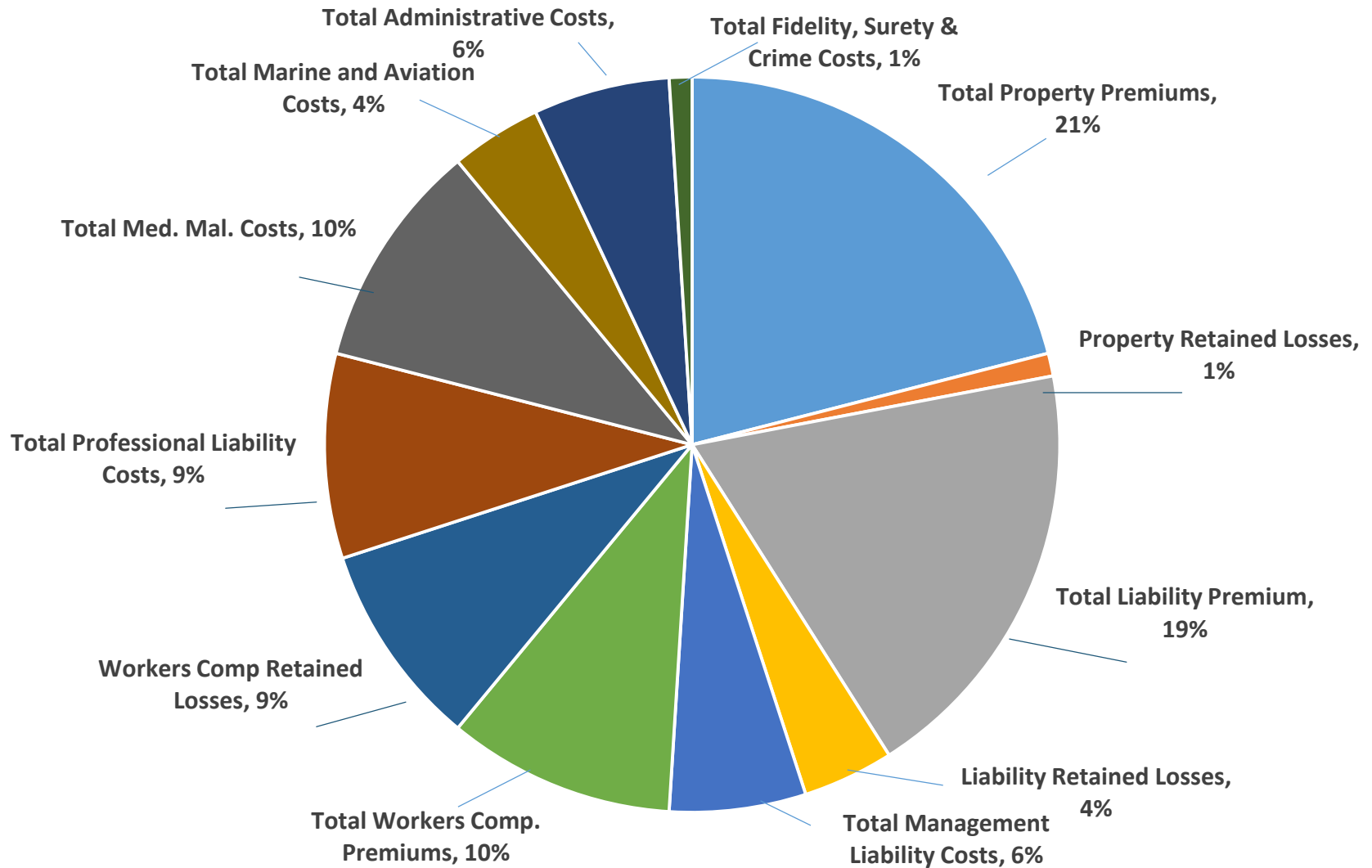
**Major Commercial Lines Renewals Were Mixed to Flat in Q2:2015; EPL, D&O and Commercial Auto Led the Way**

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.



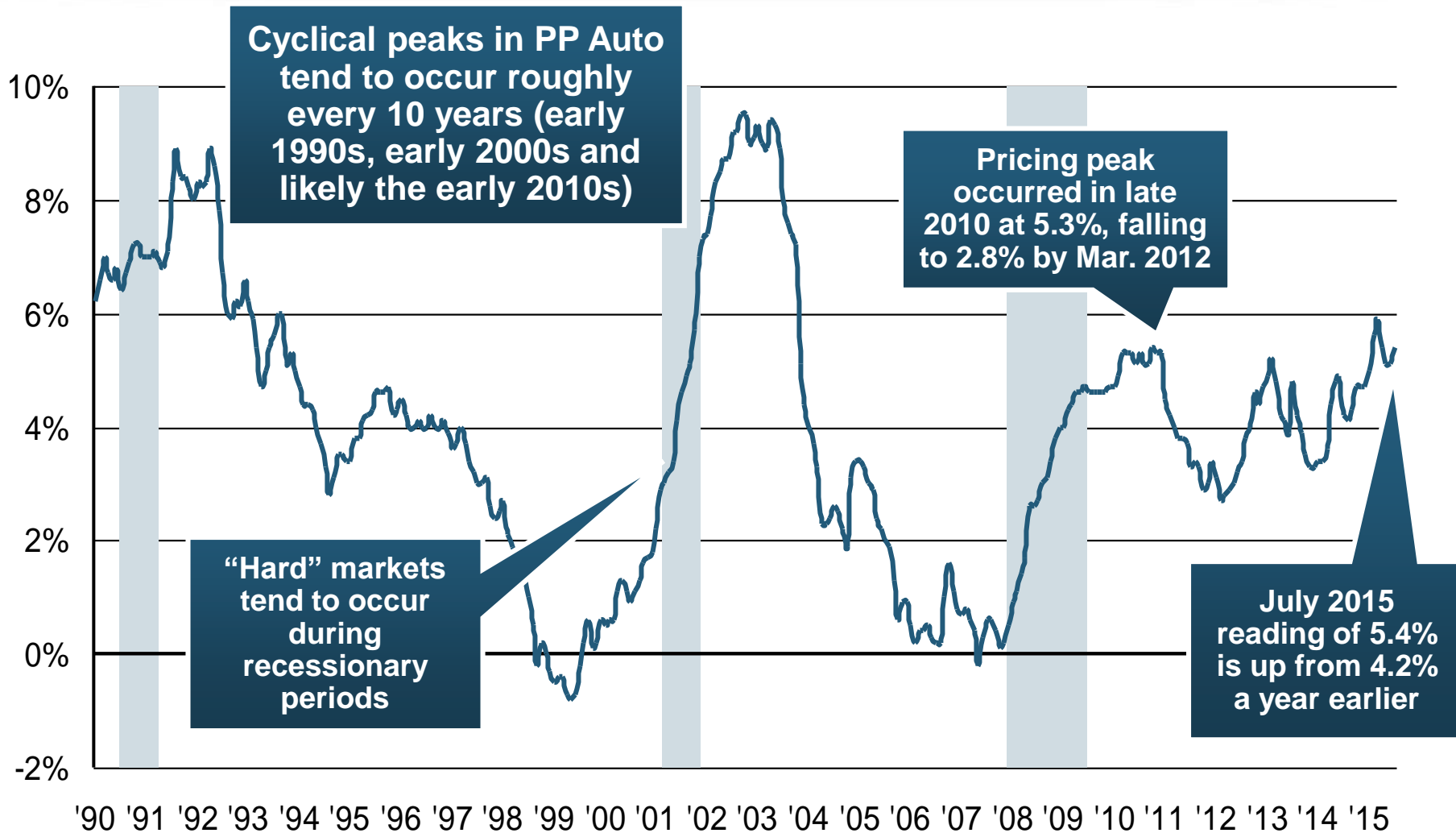
# How the Risk Dollar is Spent

## *(U.S. Firms with Revenues Under \$1 Bill)*





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



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

Note: Recessions indicated by gray shaded columns.

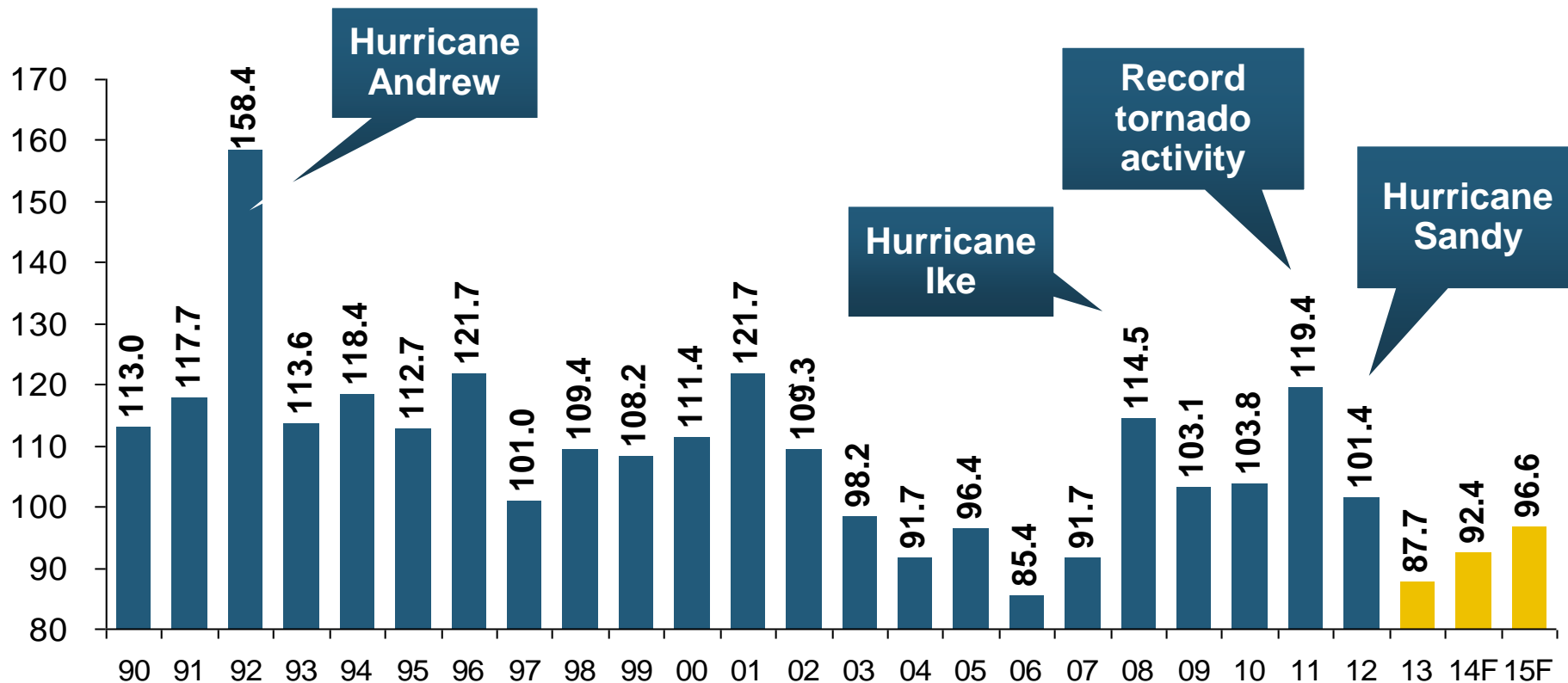
Sources: US Bureau of Labor Statistics; National Bureau of Economic Research (recession dates); Insurance Information Institutes.



# Underwriting Performance



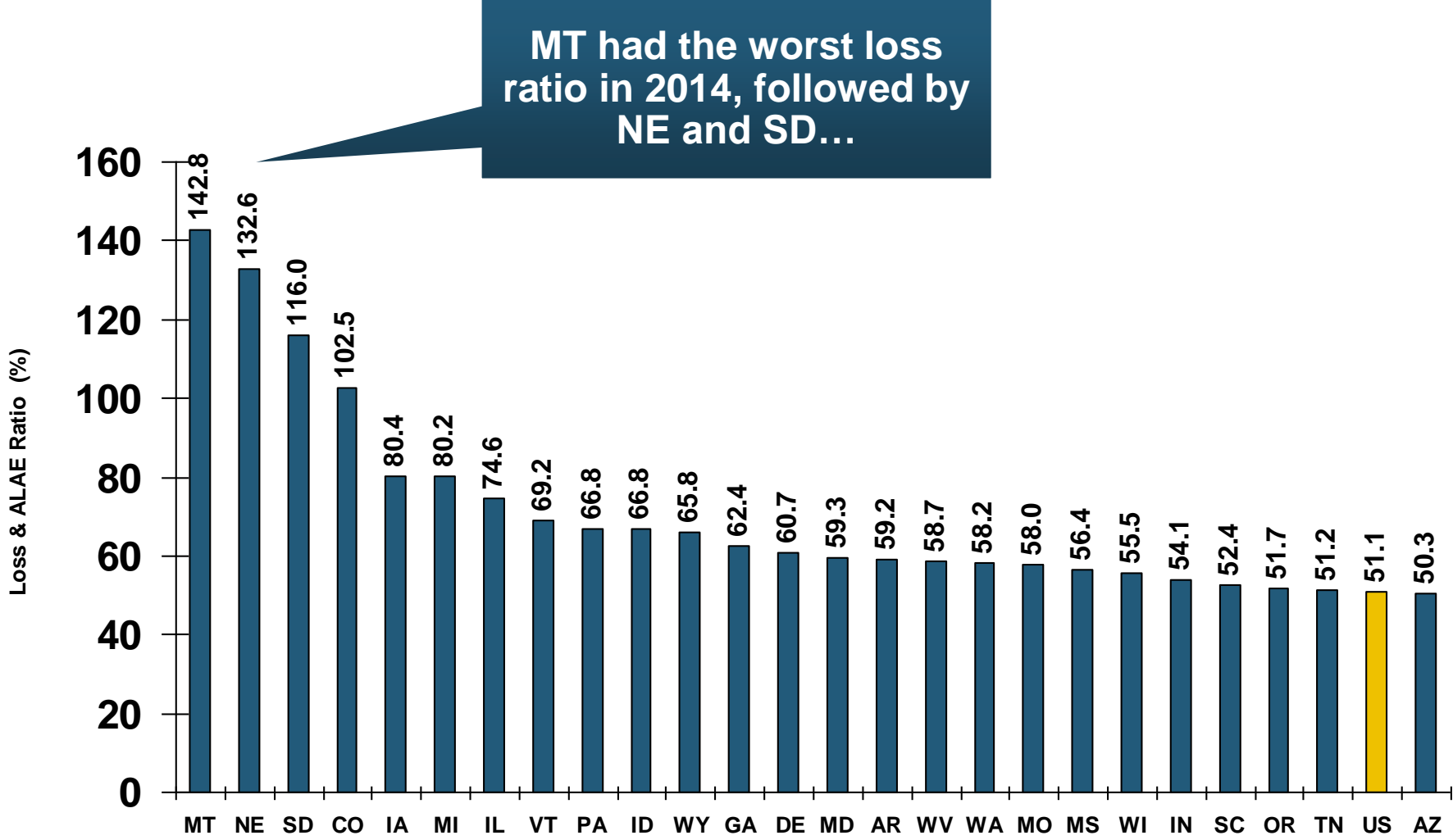
# Homeowners Insurance Combined Ratio: 1990–2015F



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

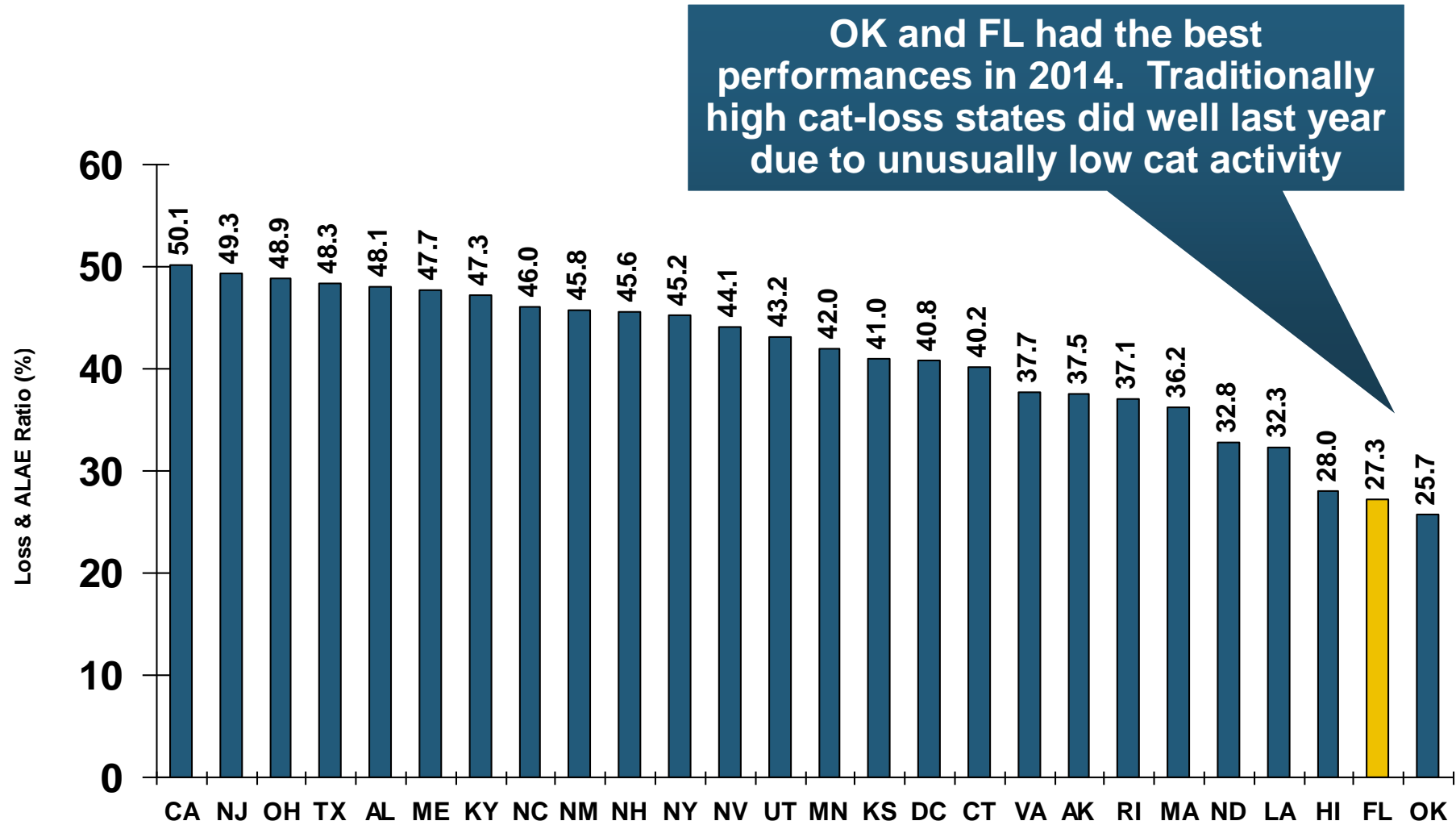


# Homeowners Multi-Peril Loss & ALAE Ratio, 2014: Highest 25 States



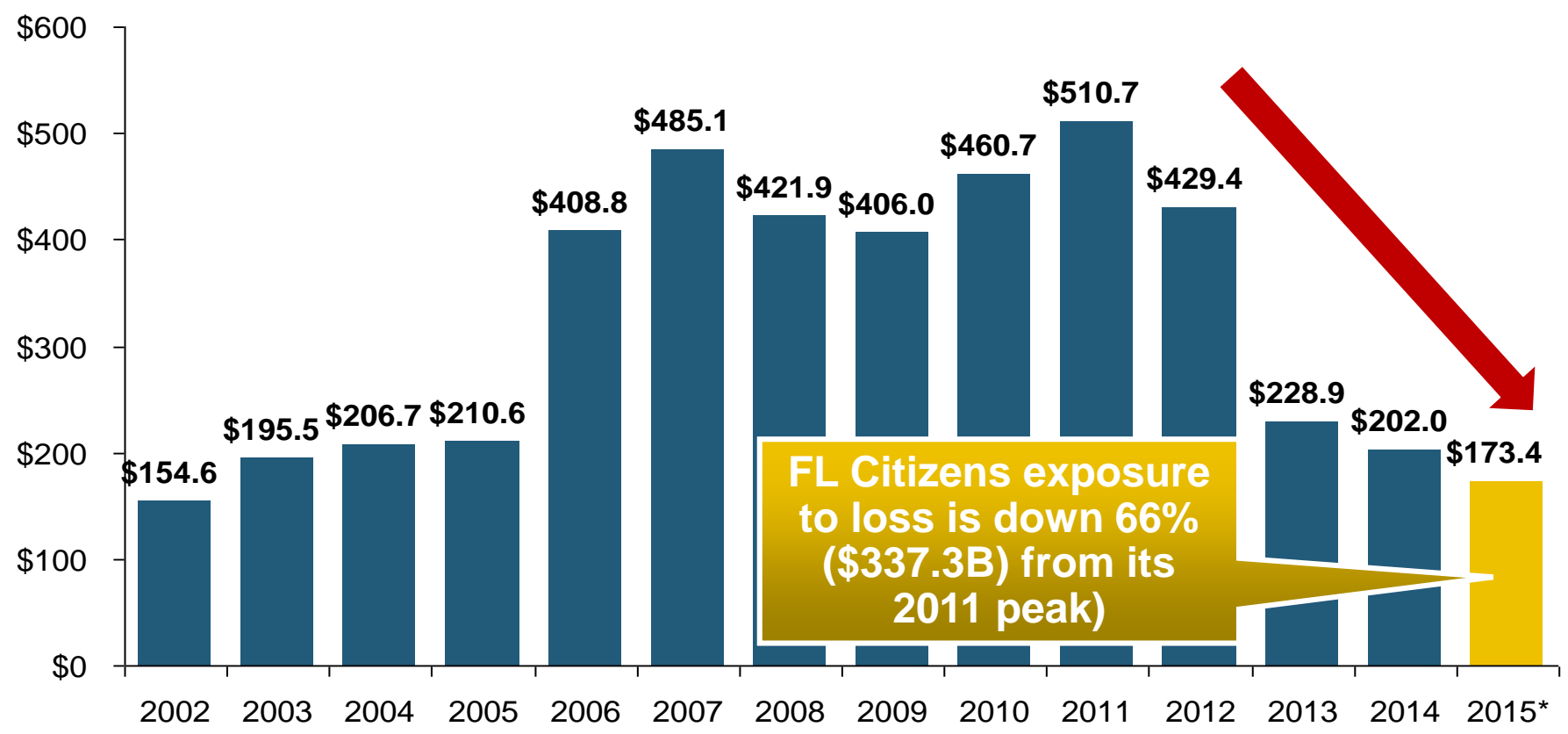


# Homeowners Multi-Peril Loss & ALAE Ratio, 2014: Lowest 25 States and DC





# Florida Citizens Exposure to Loss, 2002 – 2015\* (\$ Billions)

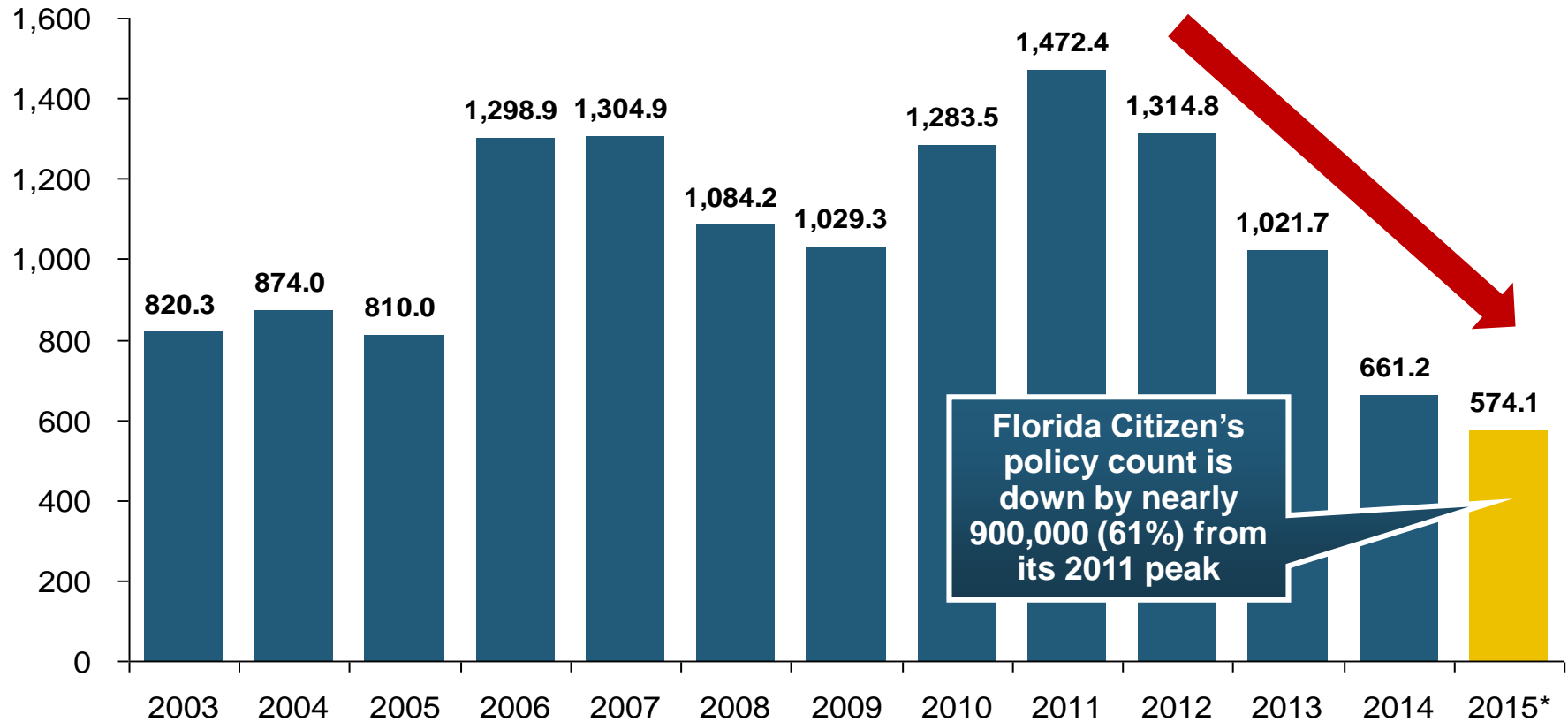


**A lack of major hurricanes, ample private sector/reinsurer capital and capital market interest—combined with structural changes to Citizens—have combined to take Citizens policy count and exposure to their lowest levels in many years**

\*As of October 6, 2015.  
Source: PIPSO; Florida Citizens <https://www.citizensfla.com/about/bookofbusiness/>; Insurance Information Institute (I.I.I.).



# Florida Citizens Policy Count, 2003 – 2015\* (Thousands)



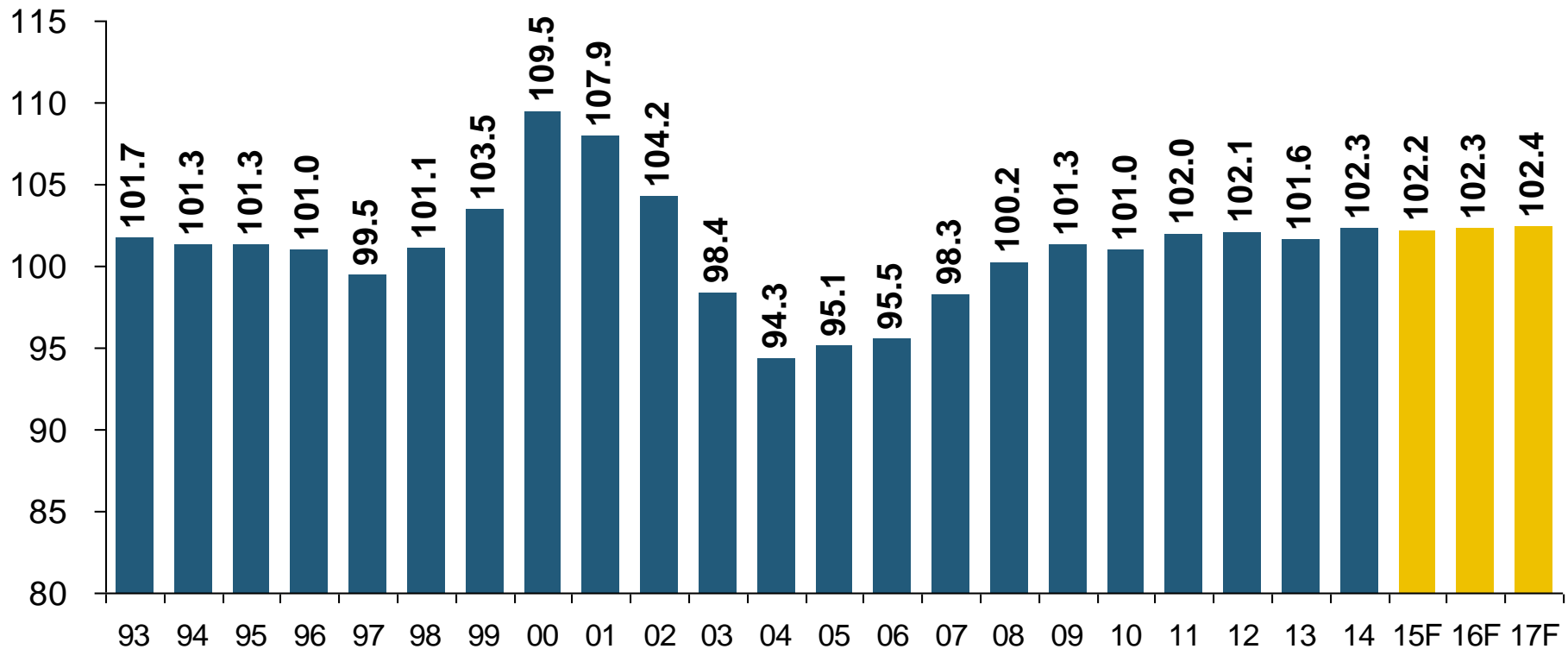
**A lack of major hurricanes, ample private sector/reinsurer capital and capital market interest—combined with structural changes to Citizens—have combined to take Citizens policy count and exposure to their lowest levels in many years**

\*As of October 6, 2015. All other figures are as of Dec. 31.

Source: Florida Citizens <https://www.citizensfla.com/about/bookofbusiness/>; Insurance Information Institute (I.I.I.).



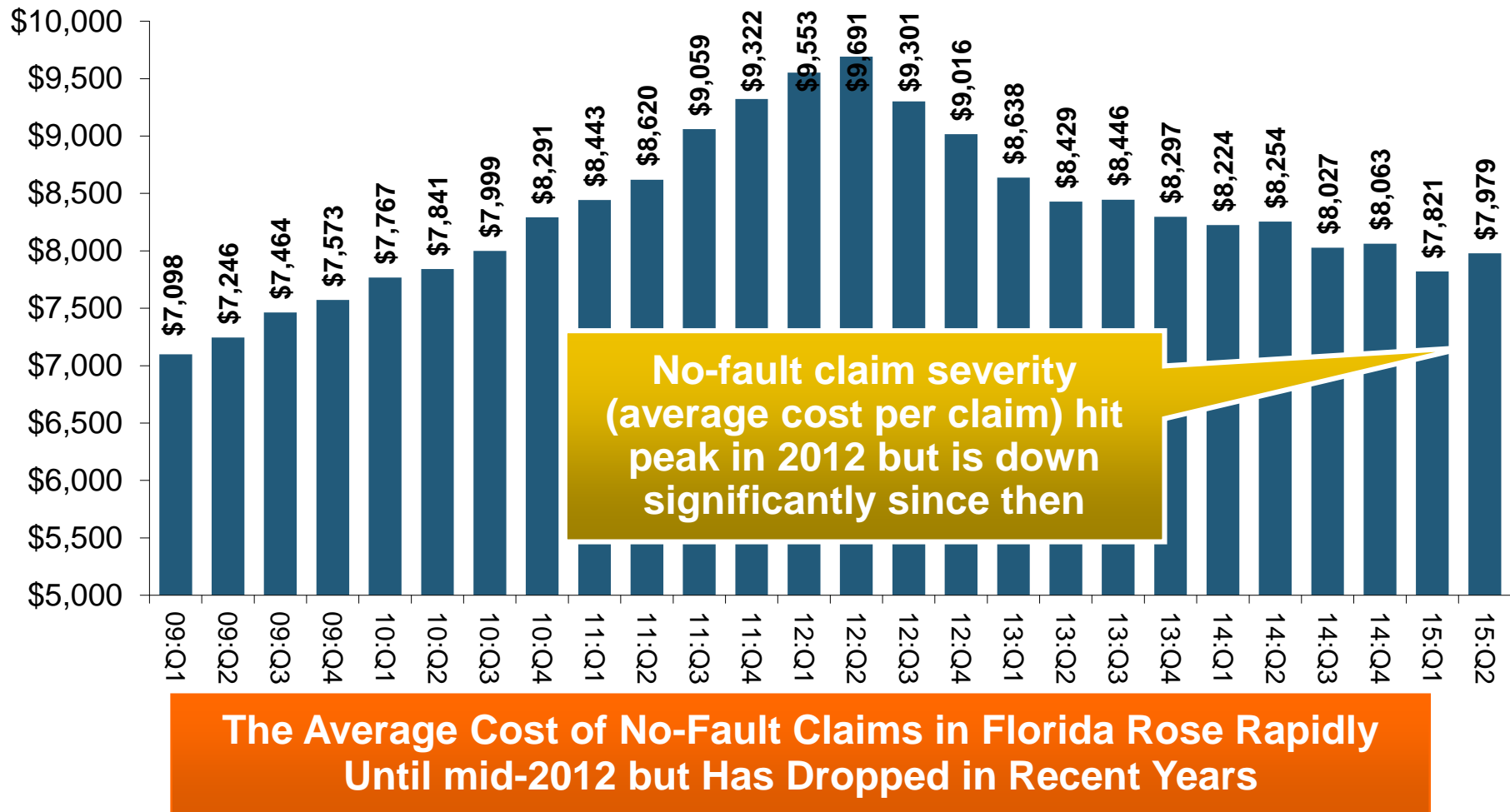
# Private Passenger Auto Combined Ratio: 1993–2017F



**Private Passenger Auto Underwriting Performance Is Exhibiting Remarkable Stability**



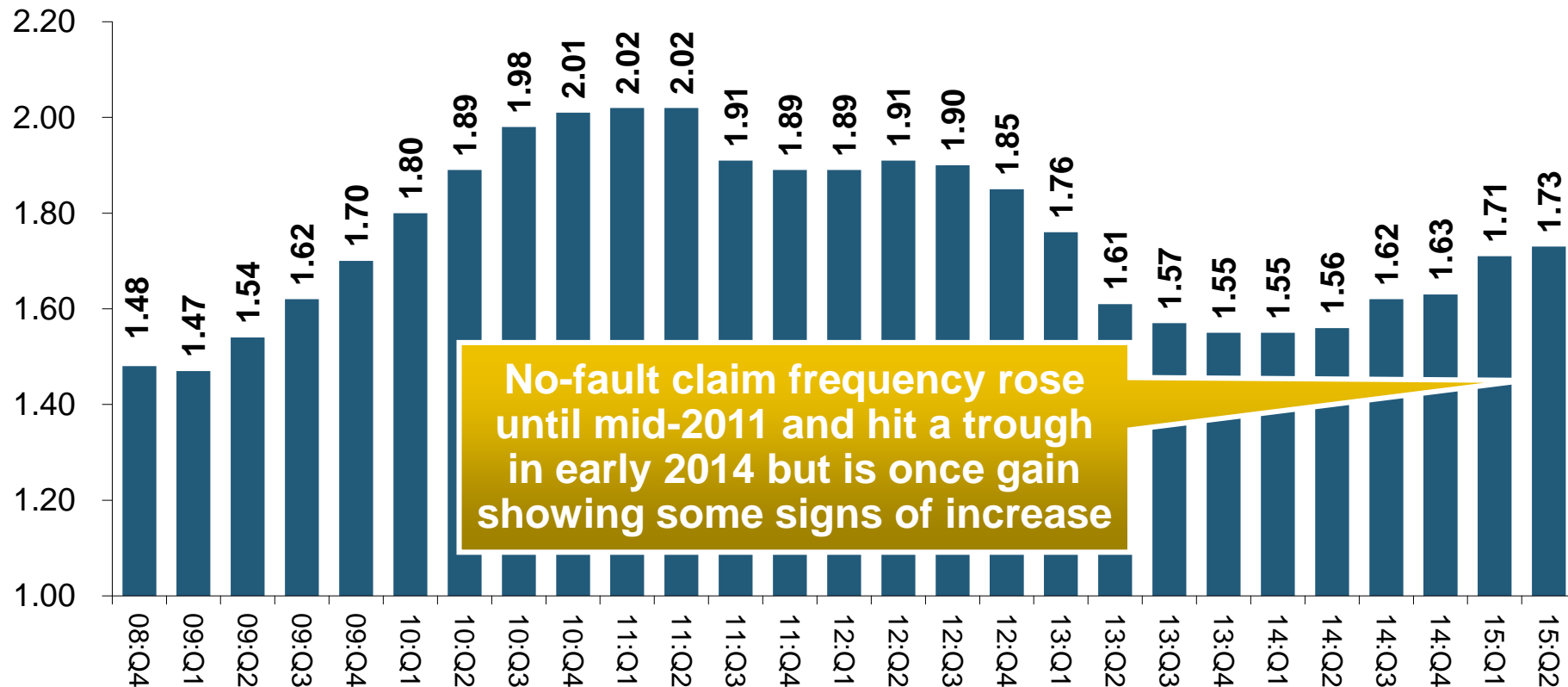
# Florida Average No-Fault Claim Severity, 2009:Q1 - 2015:Q2\*



\*All figures are the average of the most recent four quarters ending in each period.  
Source: ISO/PCI Fast Track data; Insurance Information Institute.



# Florida No-Fault Paid Claim Frequency, 2015:Q2\*



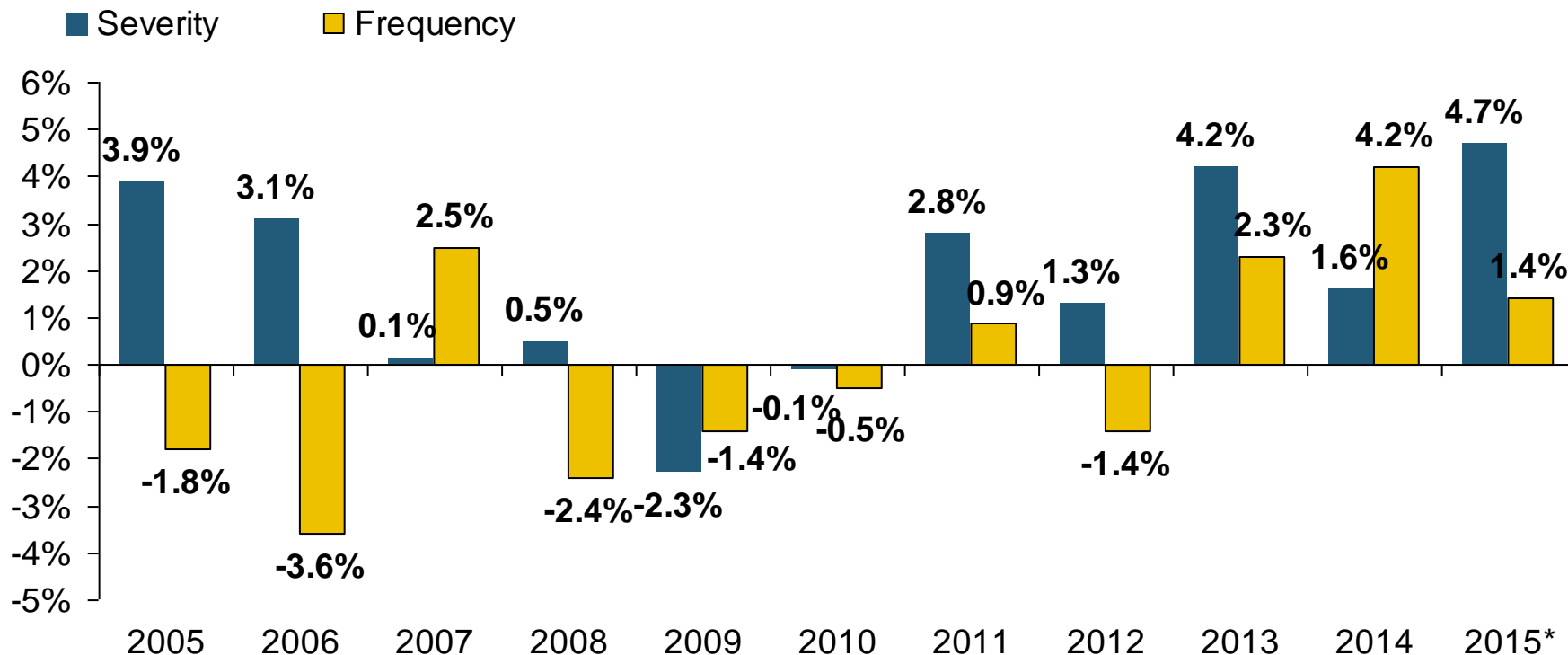
**The Frequency of No-Fault Claims in Florida Is Rising Once Again**

\*All figures are the average of the most recent four quarters ending in each period.  
Source: ISO/PCI Fast Track data; Insurance Information Institute.



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

Annual Change, 2005 through 2015\*



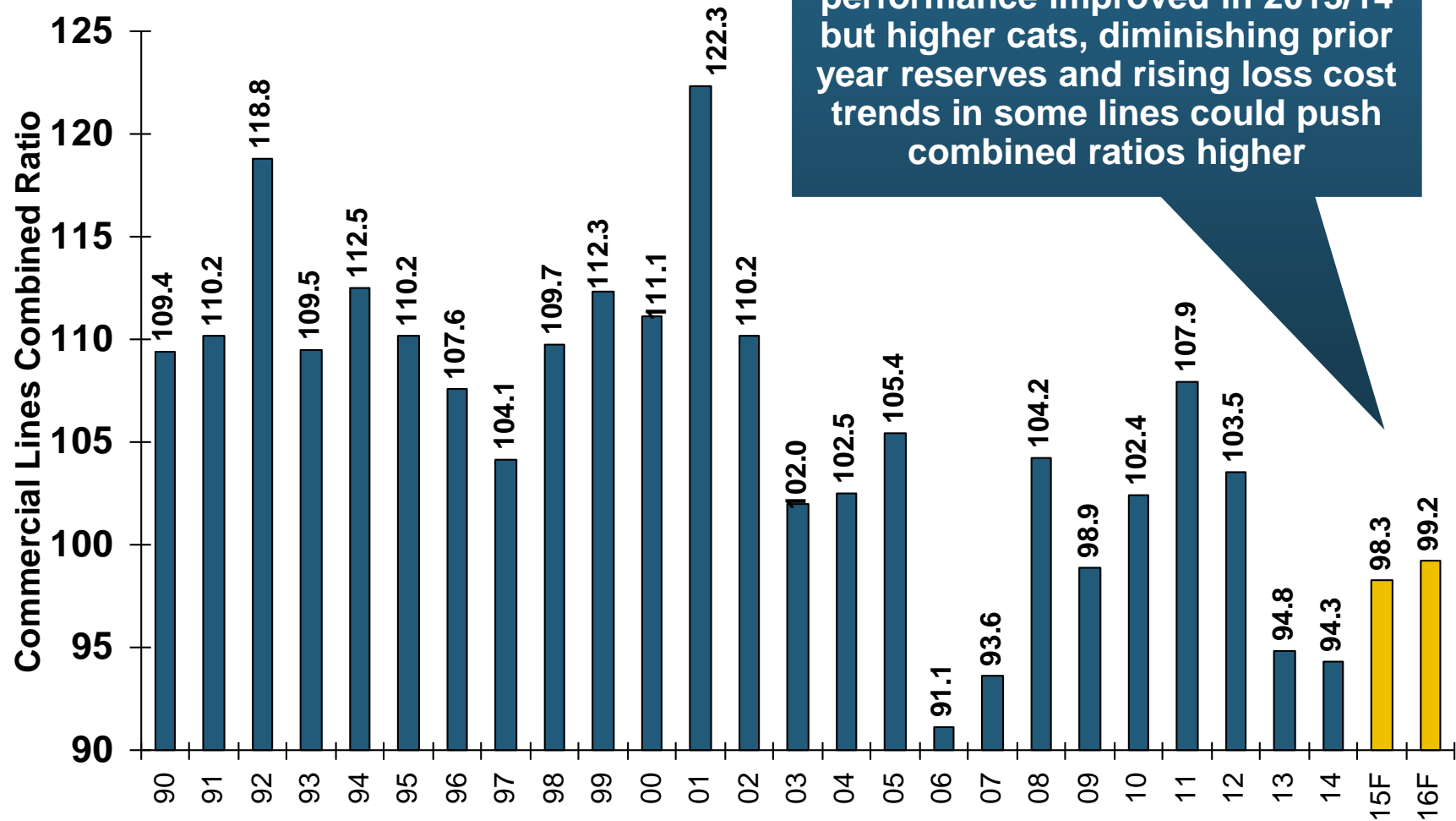
**The Recession, High Fuel Prices Helped Temper Frequency and Severity, But this Trend Will Likely Be Reversed Based on Evidence from Past Recoveries**

\*2015 figure is for the 4 quarters ending with 2015:Q2.

Source: ISO/PCI *Fast Track* data; Insurance Information Institute



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

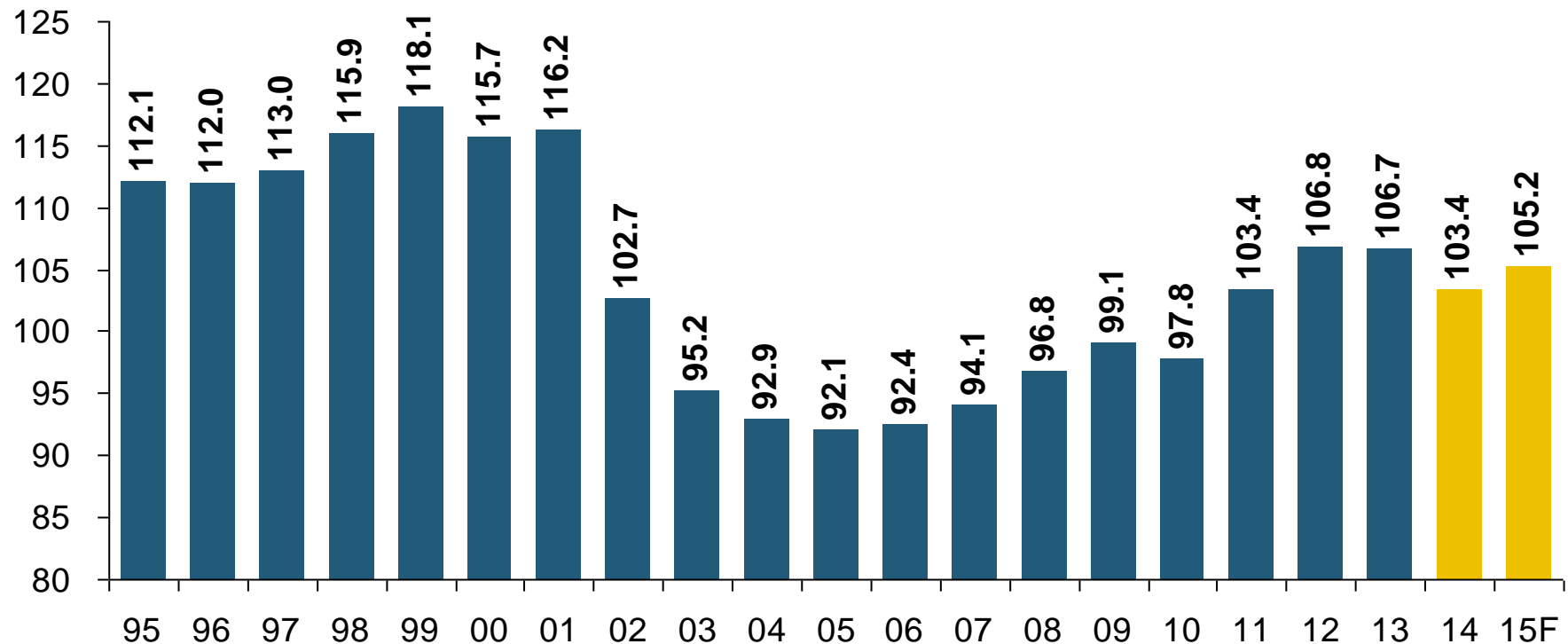


\*2007-2012 figures exclude mortgage and financial guaranty segments.

Source: A.M. Best (1990-2014); Conning (2015-16F) Insurance Information Institute.



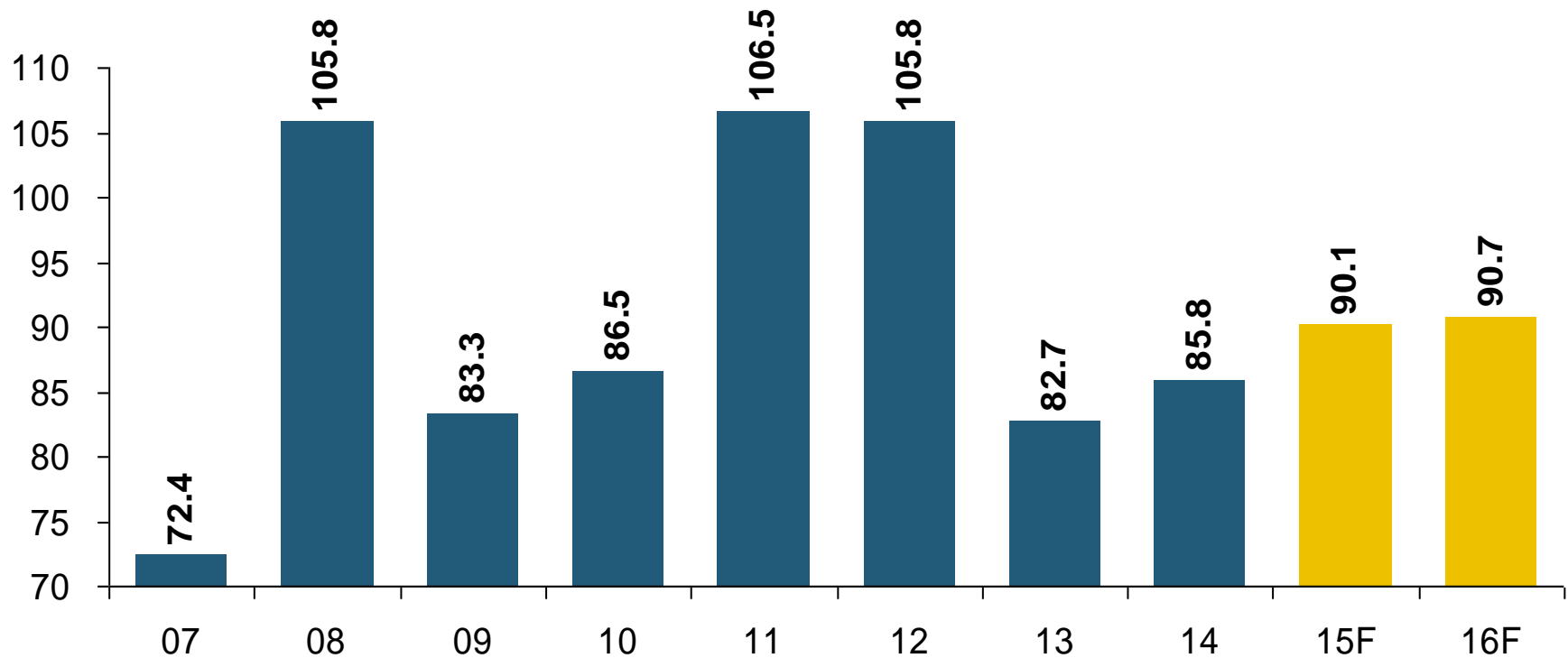
# Commercial Auto Combined Ratio: 1993–2015F



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



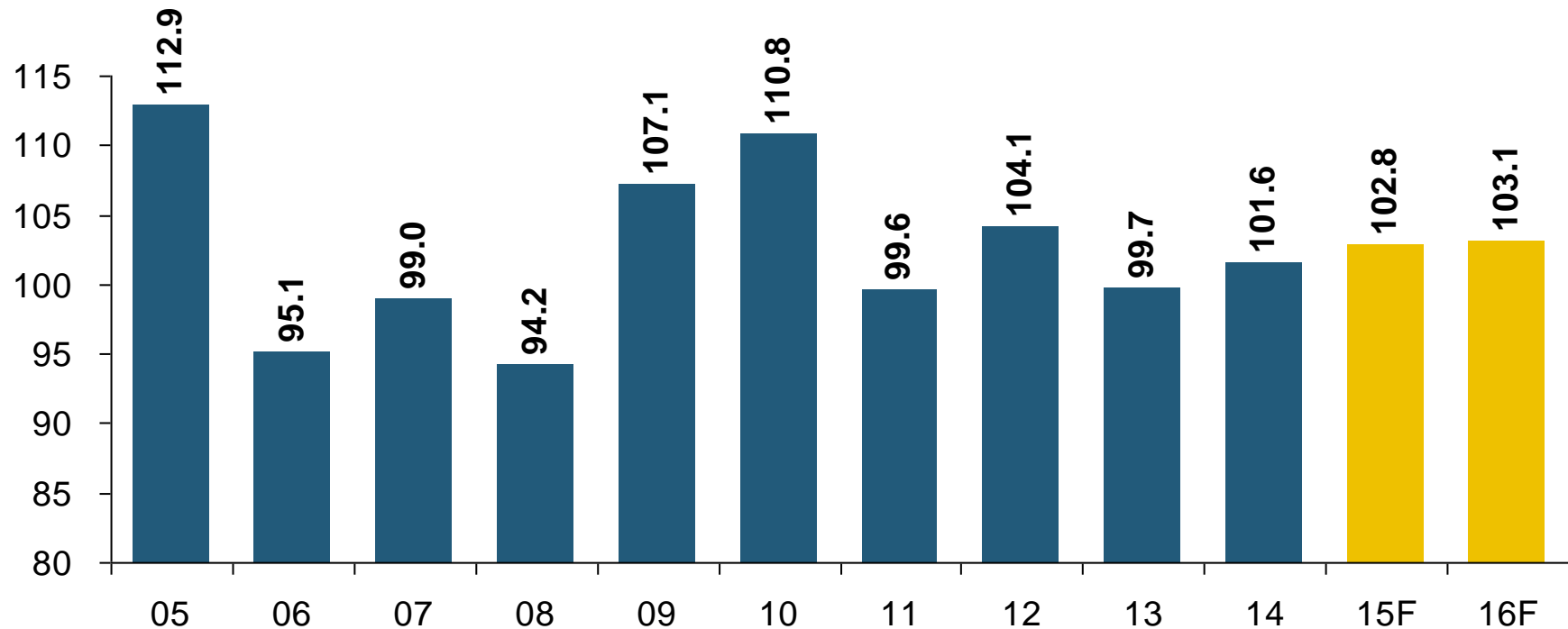
# Commercial Property Combined Ratio: 2007–2016F



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



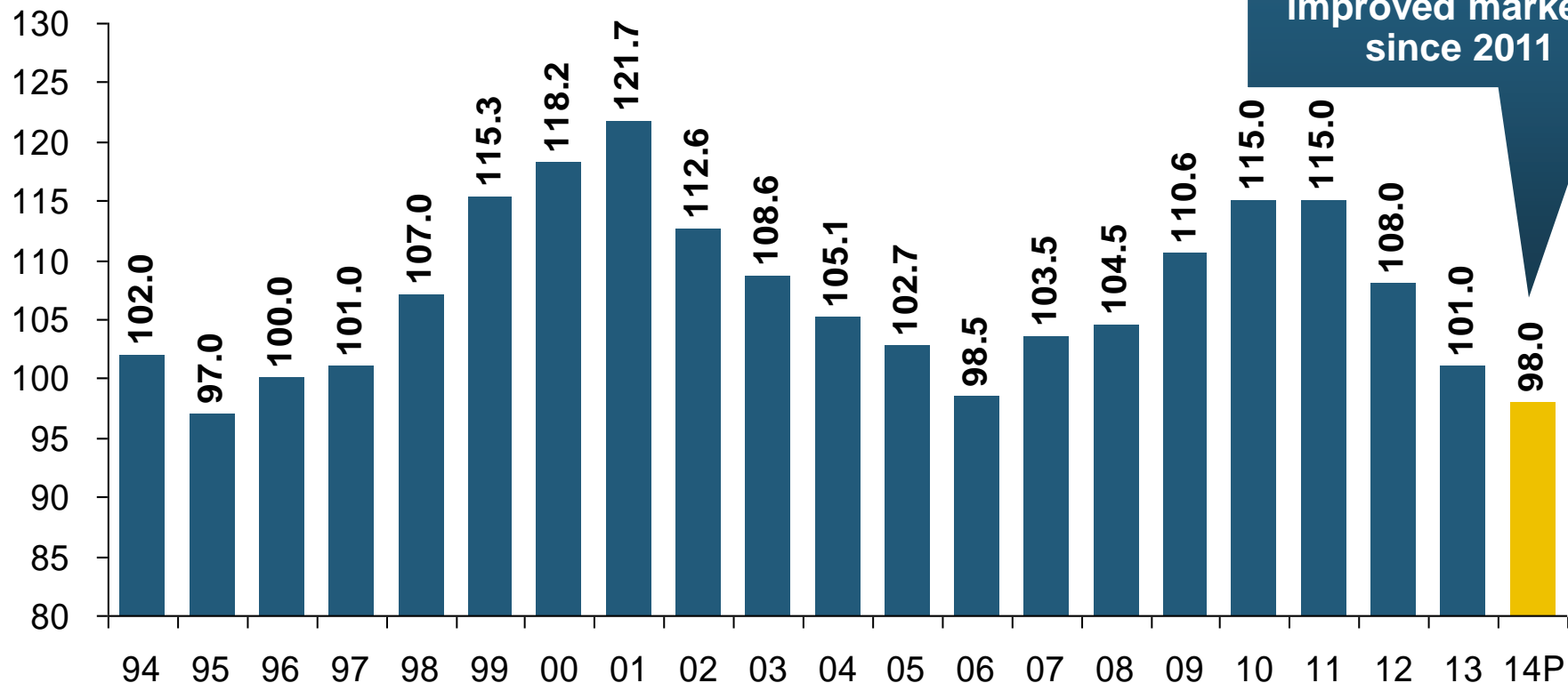
# General Liability Combined Ratio: 2005–2016F



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



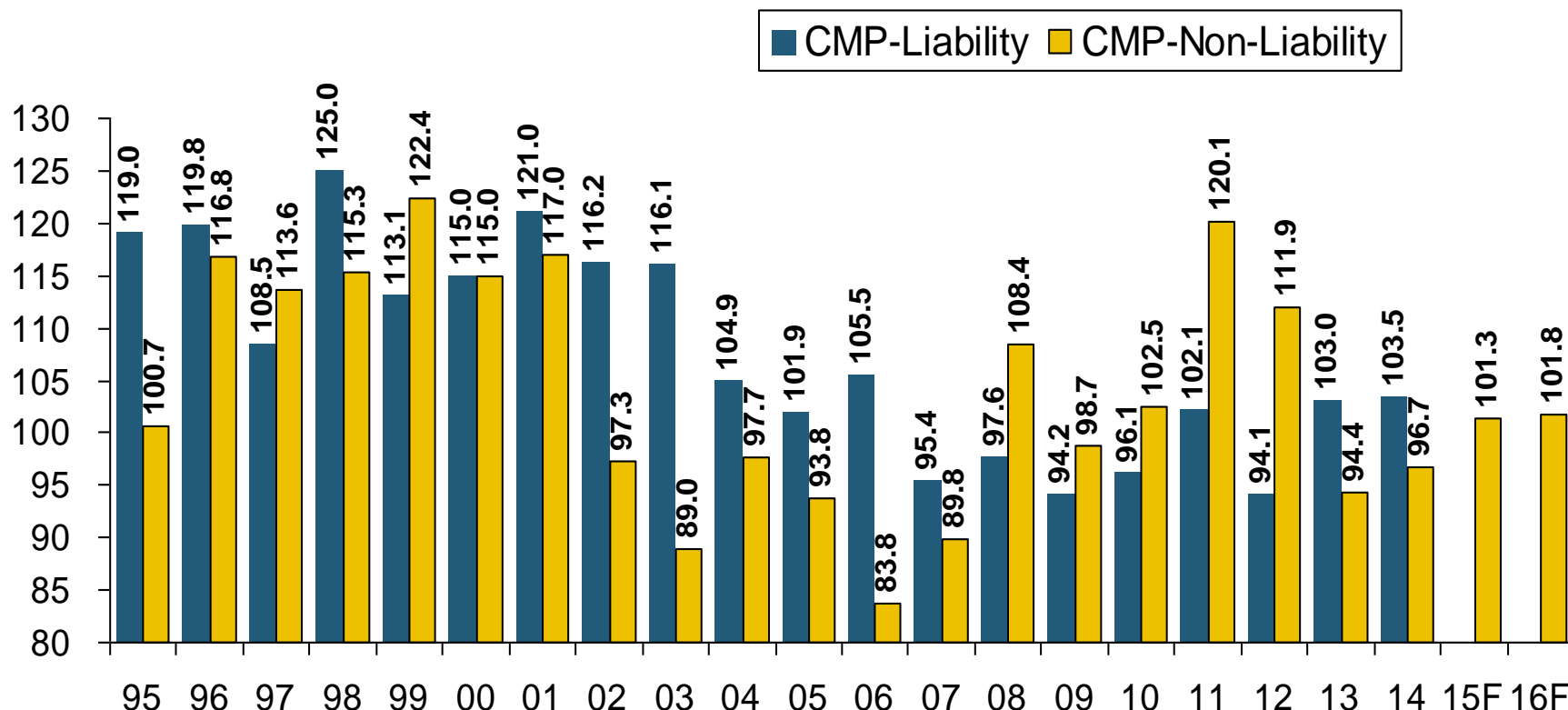
# Workers Compensation Combined Ratio: 1994–2014P



**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.**



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

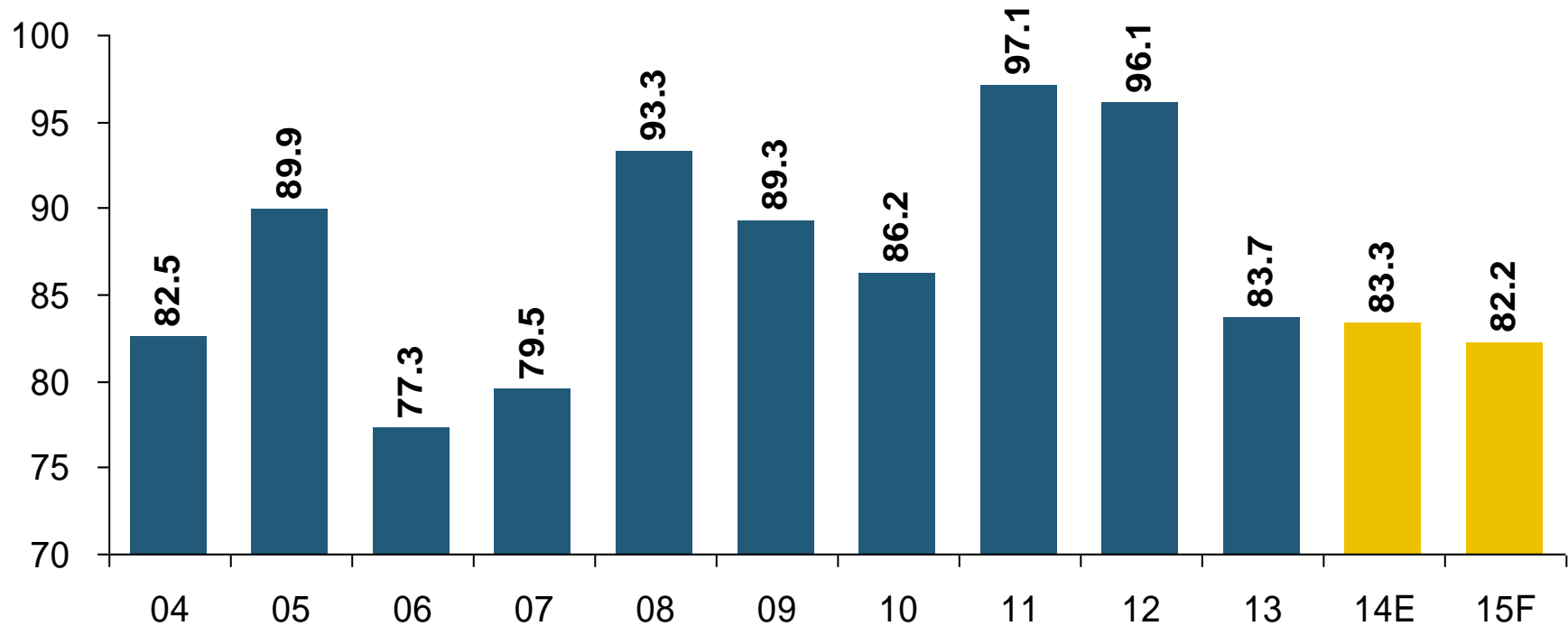


**Commercial Multi-Peril Underwriting Performance is Expected to Remains Stable in 2015 Assuming Normal Catastrophe Loss Activity**

\*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**



# Insured Catastrophe Losses

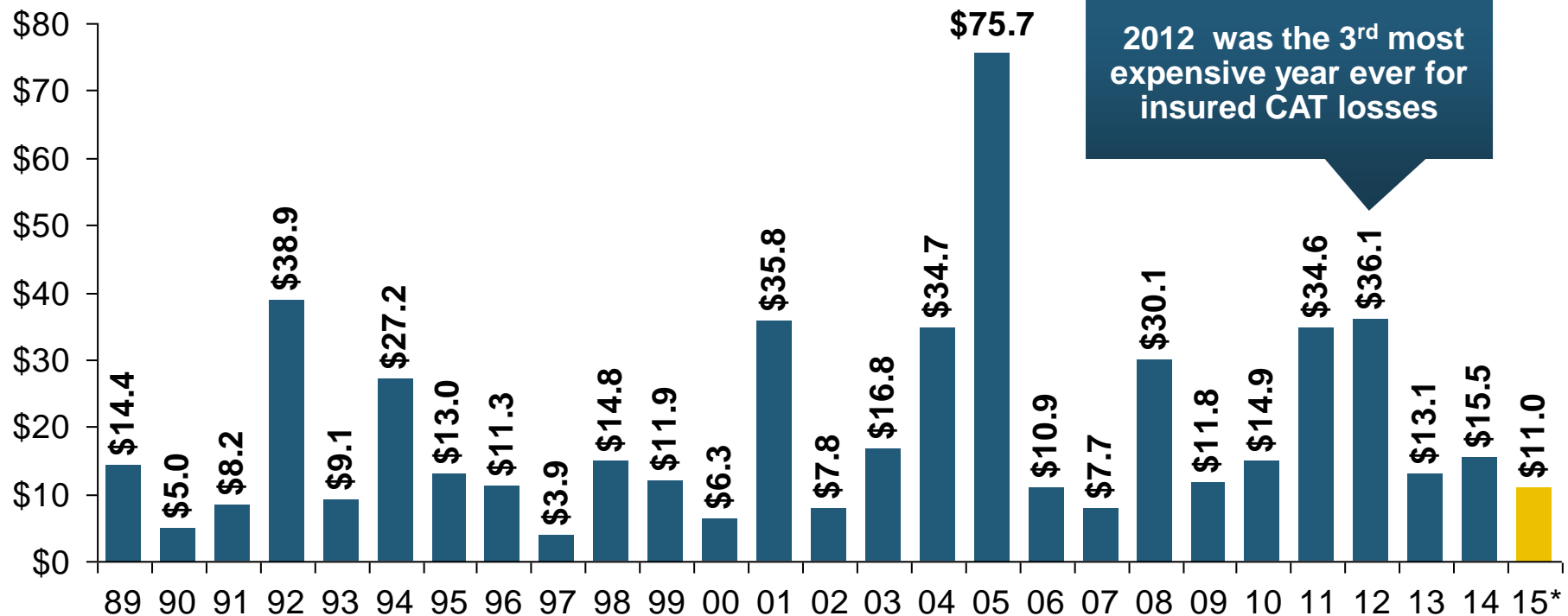
**2013/14 and YTD 2015 Experienced Below  
Average CAT Activity After Very High CAT  
Losses in 2011/12**

***Winter Storm Losses Far Above Average in  
2014 and 2015***



# U.S. Insured Catastrophe Losses

(\$ Billions, \$ 2014)



2012 was the 3<sup>rd</sup> most expensive year ever for insured CAT losses

**2013/14 Were Welcome Respites from 2011/12, among the Costliest Years for Insured Disaster Losses in US History. Longer-term Trend is for more—not fewer—Costly Events**

\$11.0B in insured CAT losses though 9/30/15

\*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.



# US Insured CAT Losses Through Q3 to Date: 30 Events =\$11 Billion in Claims

## PCS Cat Activity 2015

2  
0  
1  
5

- 30 cats YTD
- \$10.977B thru 3<sup>rd</sup> Quarter
- 7 winter storms
- 19 wind and thunderstorms
- 2 wildland fires
- 1 tropical storm
- 1 riot

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- 27 designated cats
- \$21B in insured loss
- More peril diversity



**Thunderstorms Drive 2015 Activity**



# 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	AL, 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	AL, 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



# 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.

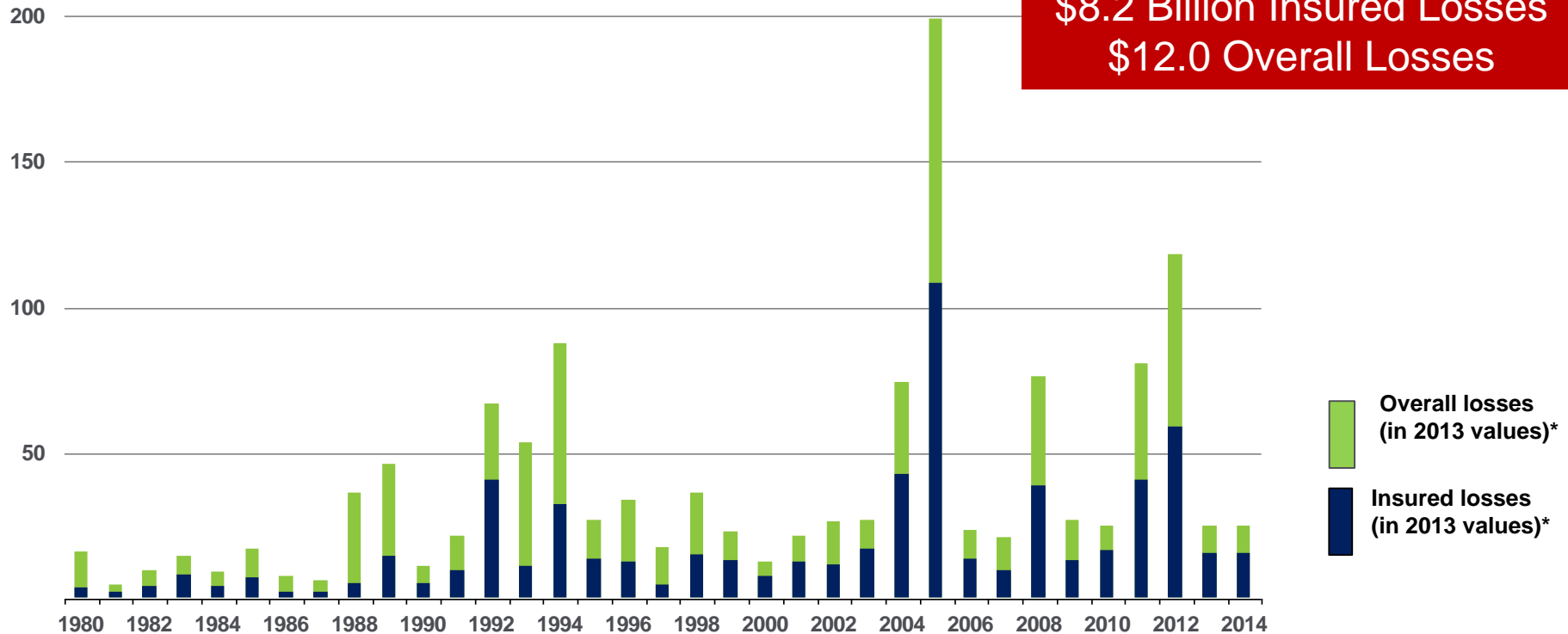


# Loss Events in the US, 1980 – 2014

## Overall and Insured Losses

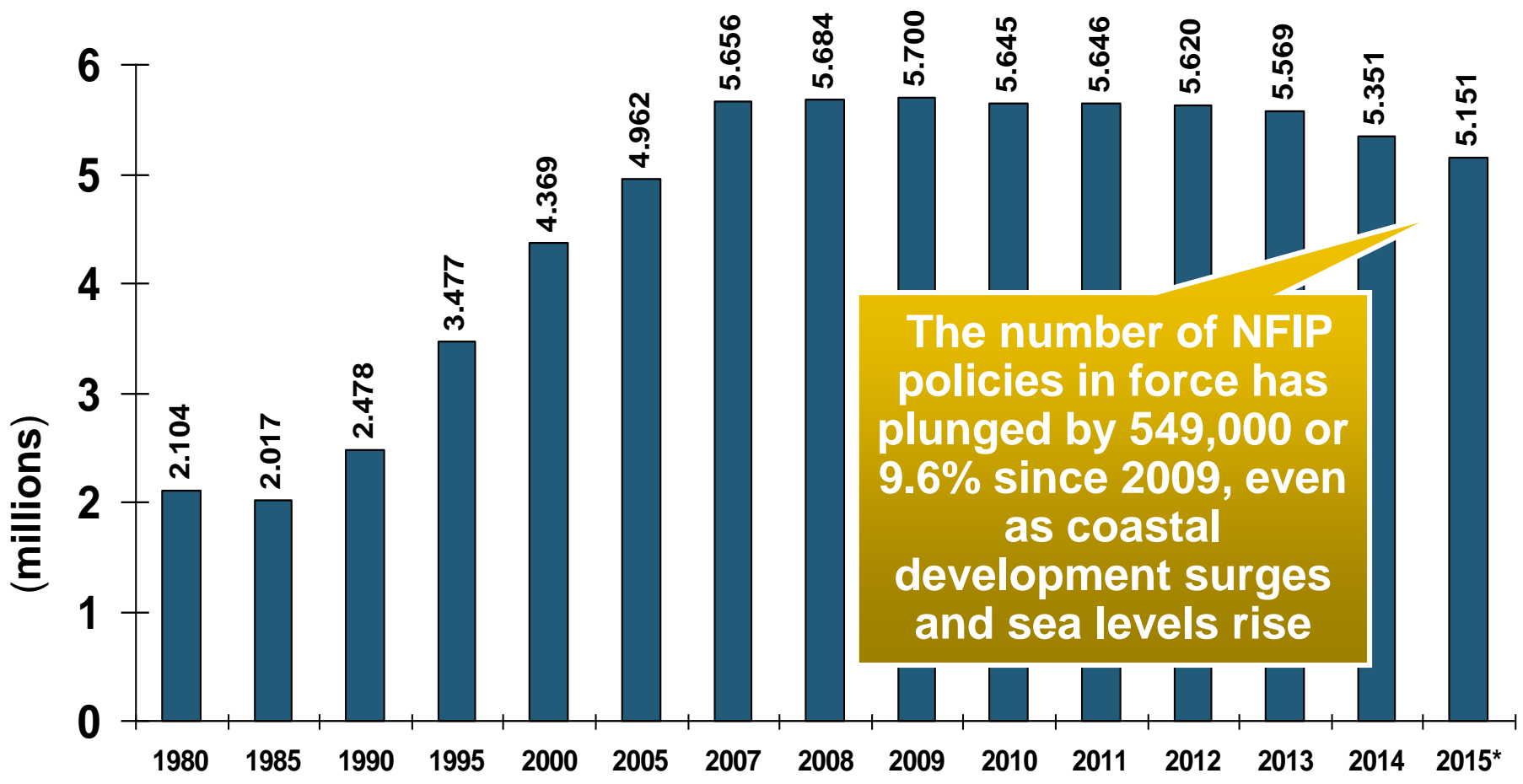
Overall losses totaled \$25bn; Insured losses totaled \$15.3bn

\$ Billions





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

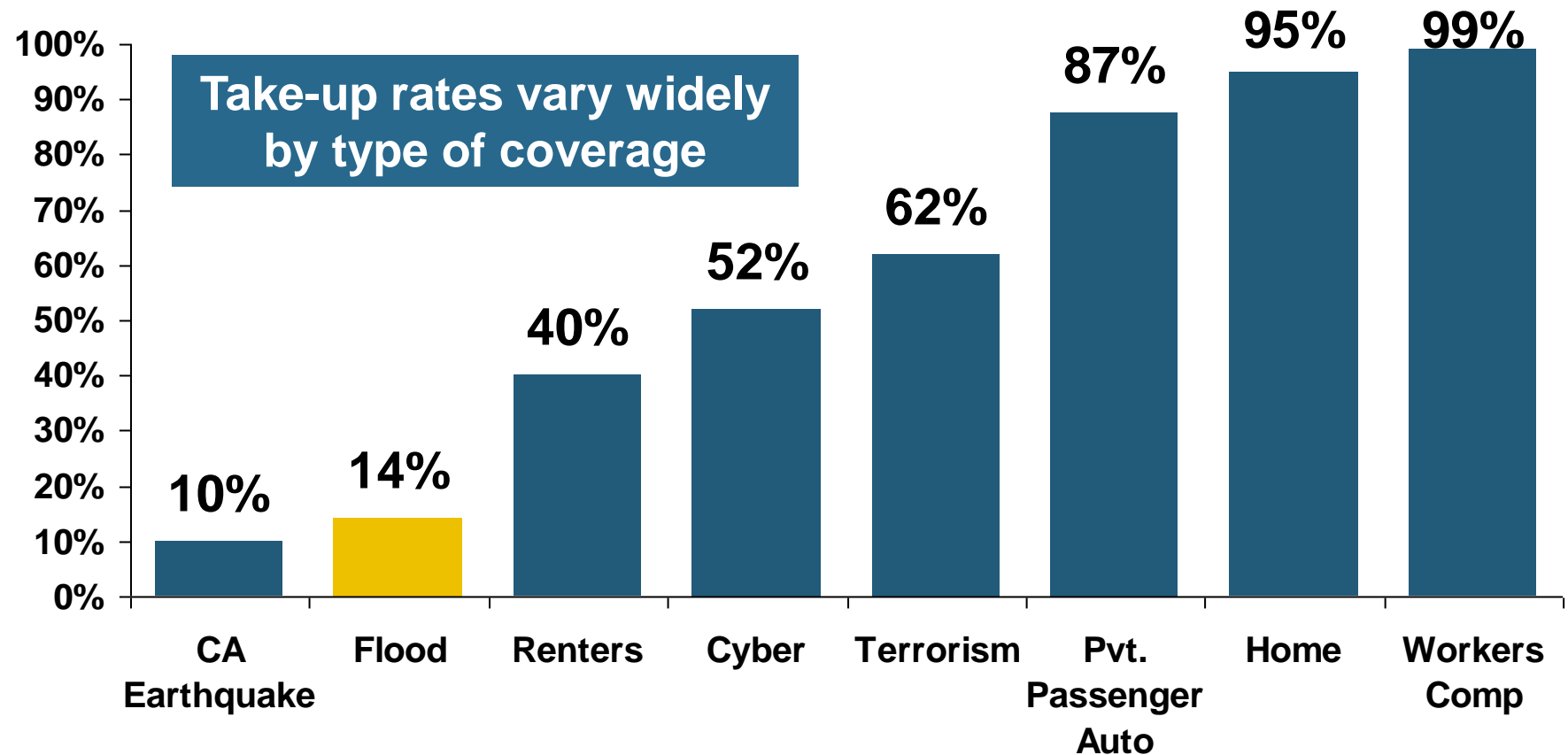


Source: National Flood Insurance Program.  
\* As of July, 2015



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

## Take-Up Rate

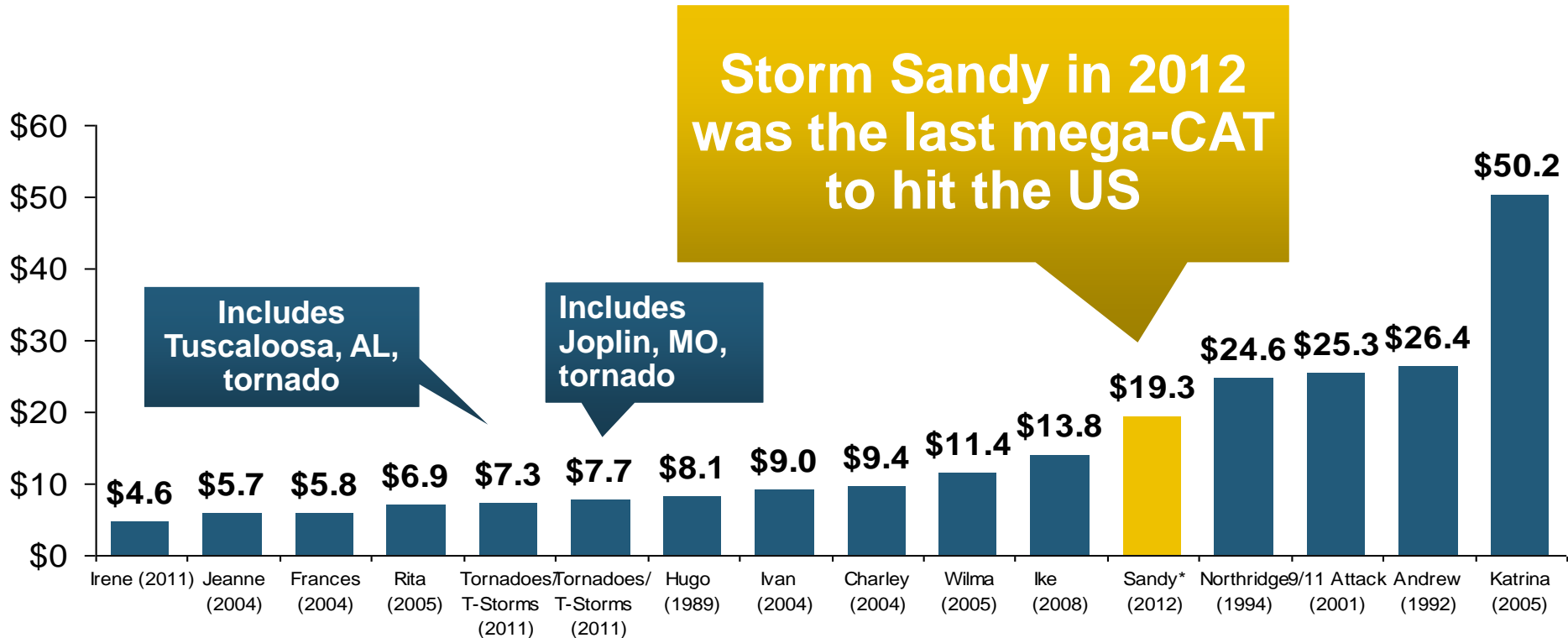


Sources: CA Earthquake (WSJ, <http://www.wsj.com/articles/california-pushes-homeowners-to-insure-against-earthquakes-1440980138>); Flood and Renters (I.I.I. June 2015 Pulse Survey); Cyber (Advisen, 2015); Terrorism (Marsh Global Analytics, 2014 *Terrorism Risk Insurance Report*, April 2014; data for 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)

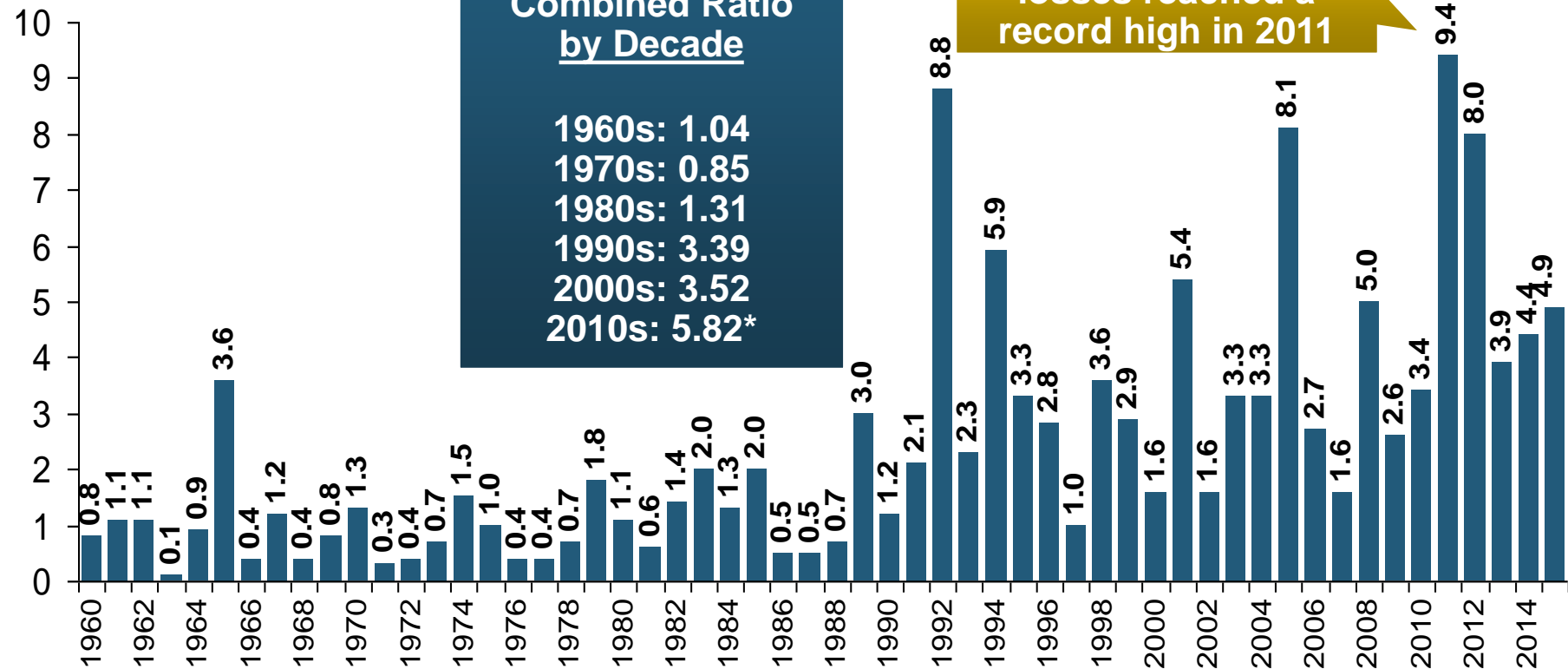


**12 of the 16 Most Expensive Events in US History Have Occurred Since 2004**



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

## Combined Ratio Points



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

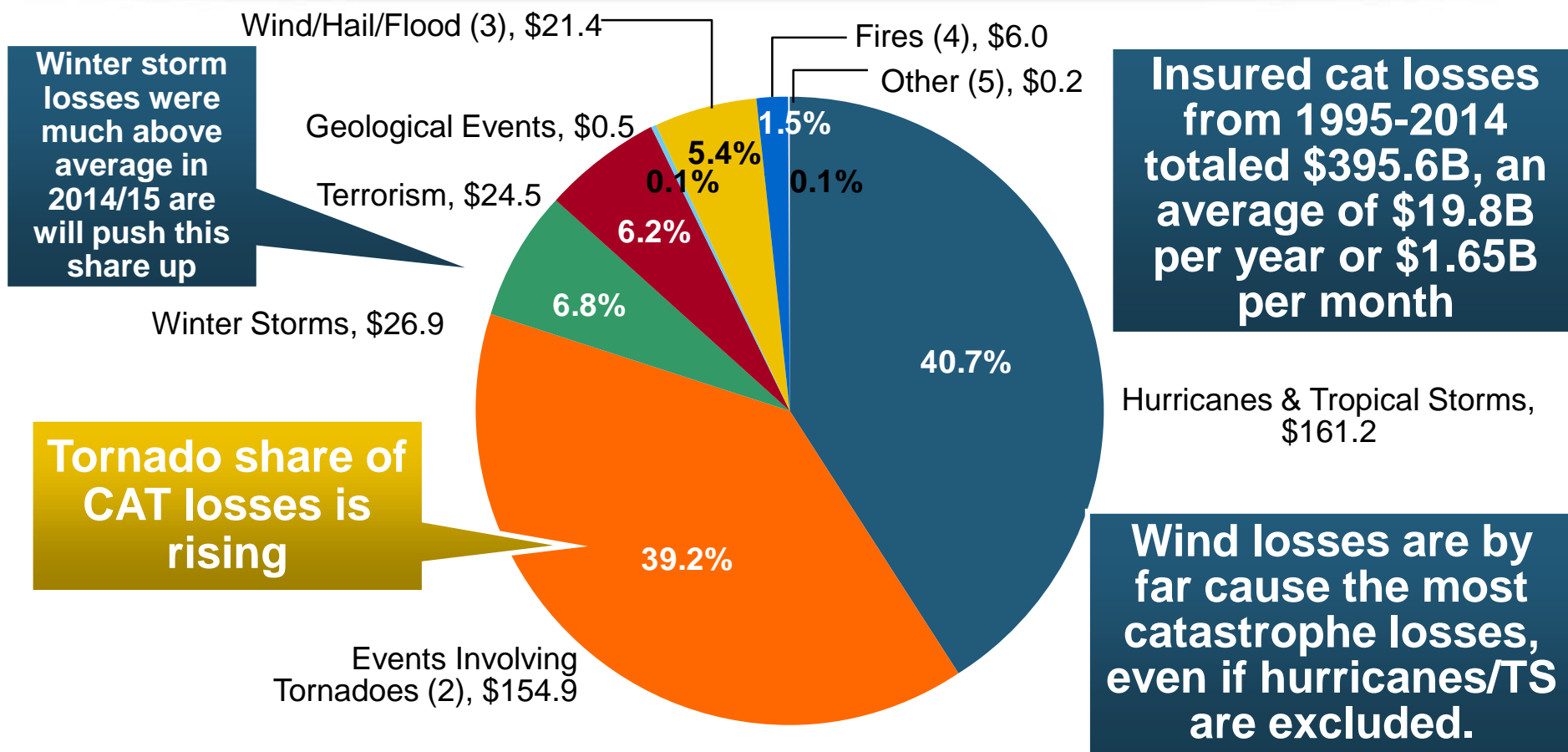
\*2010s represent 2010-2014.

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.



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



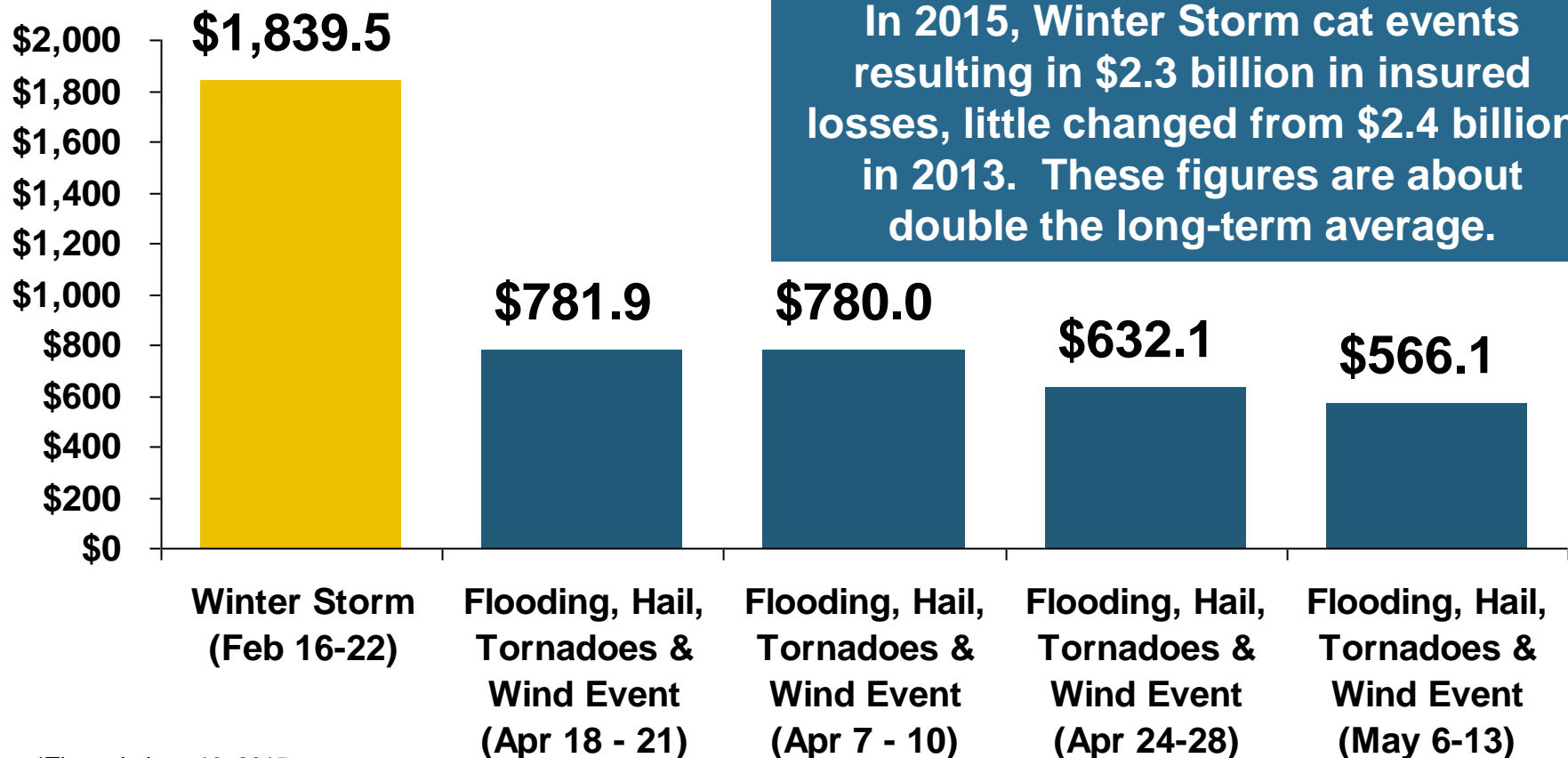
1. Catastrophes are defined as events causing direct insured losses to property of \$25 million or more in 2014 dollars.
2. Excludes snow.
3. Does not include NFIP flood losses
4. Includes wildland fires
5. Includes civil disorders, water damage, utility disruptions and non-property losses such as those covered by workers compensation.

Source: ISO's Property Claim Services Unit.



# Top 5 Insured Catastrophe Losses in 2015\*

(\$ Millions)



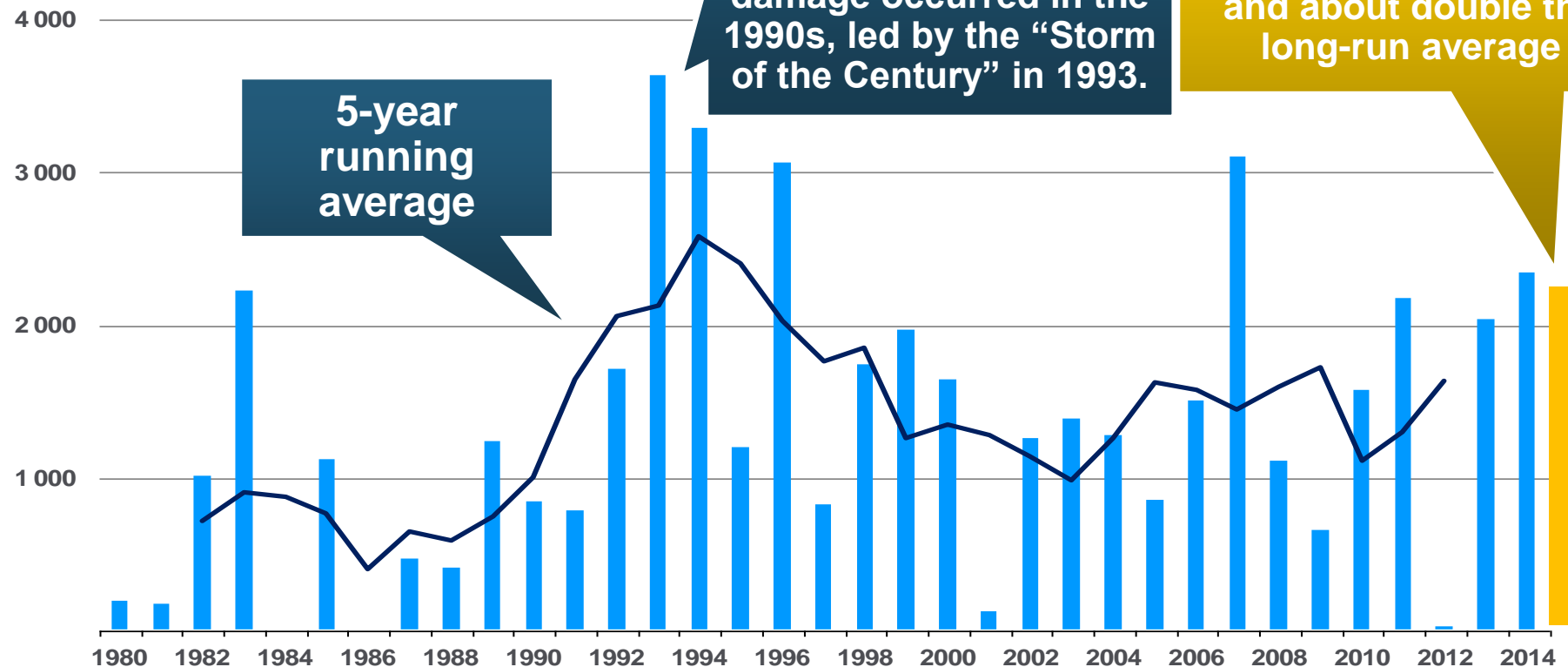
\*Through June 10, 2015.

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



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

\$ Billions, in 2014 Dollars



Three of the four most costly years ever for insured losses from winter storms and damage occurred in the 1990s, led by the “Storm of the Century” in 1993.

2015 insured winter storm losses totaled \$2.3B, similar to 2014 and about double the long-run average

5-year  
running  
average

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

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



# Natural Disaster Losses in the U.S., First Half 2015

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
<i>Winter Storms &amp; Cold Waves</i>	<i>11</i>	<i>80</i>	<i>3,800</i>	<i>2,900</i>
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
<b>Totals</b>	<b>80</b>	<b>154</b>	<b>12,600</b>	<b>8,200</b>



# Natural Disaster Losses in the US, 2014

## Based on perils

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
<i>Winter Storm, winter damage, cold wave, snow storm</i>	<b>13</b>	<b>115</b>	<b>3,700</b>	<b>2,300</b>
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



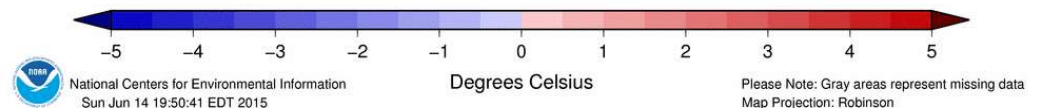
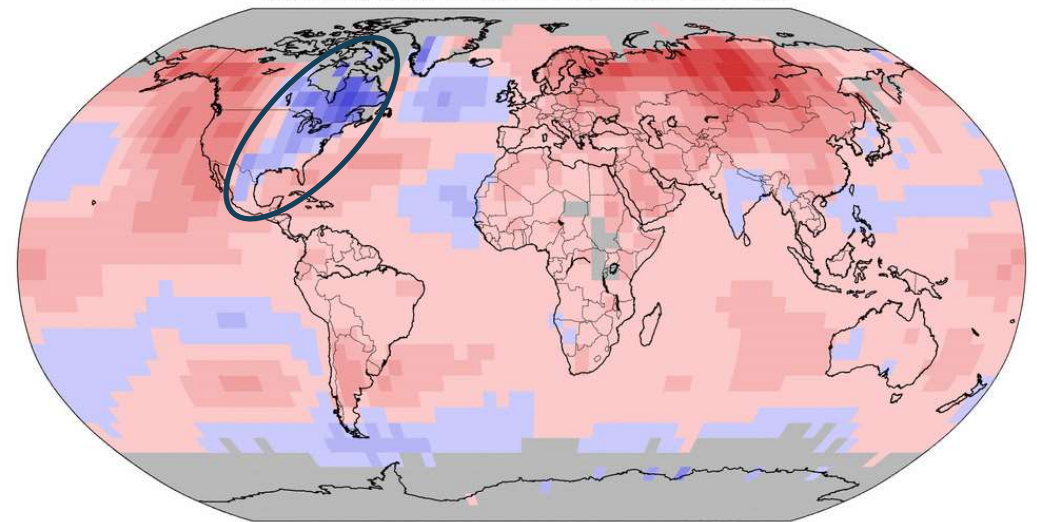
# The World is Warmer...With One Big Exception!

## 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!***

Land & Ocean Temperature Departure from Average Jan–May 2015  
(with respect to a 1981–2010 base period)

Data Source: GHCN–M version 3.3.0 & ERSST version 4.0.0





# 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
<b>2015</b>	<b>0</b>	<b>Apr 18 – May 1</b>	<b>MD</b>	<b>23,900,000</b>	<b>23.9*</b>
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.



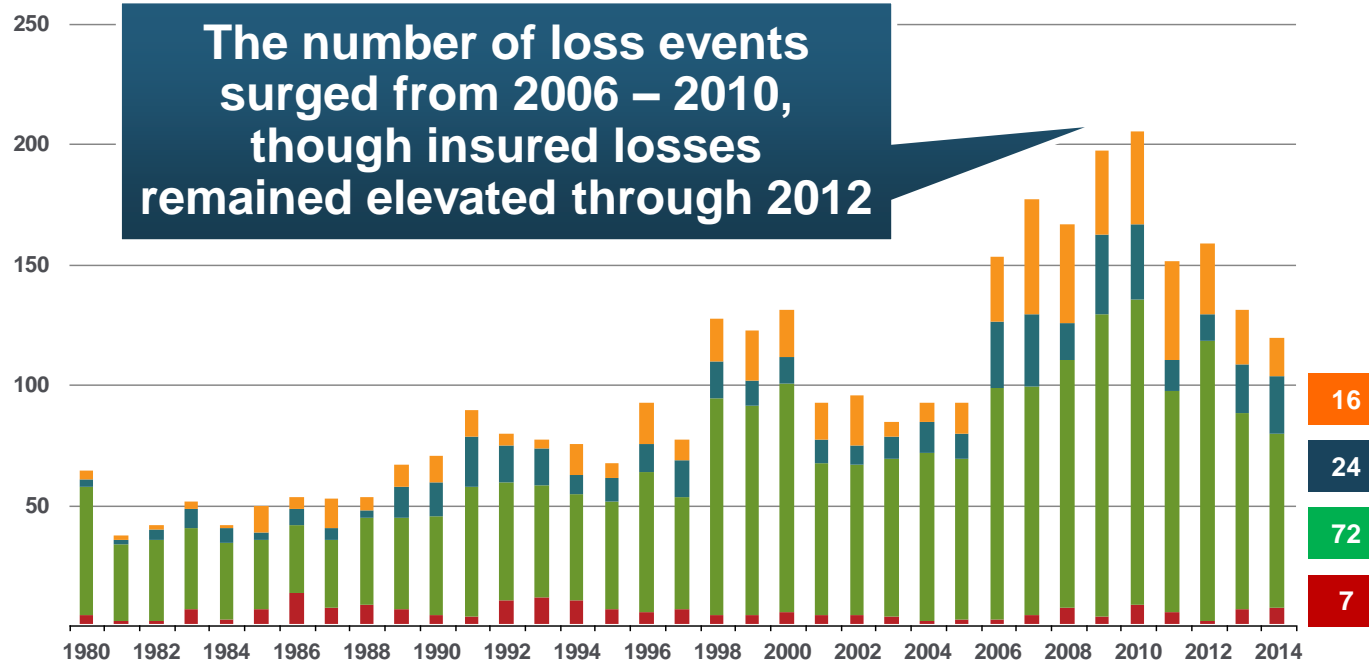
# Loss events in the US, 1980 – 2014

## Number of events

Number of Events

**2014 Total:  
119 Events**

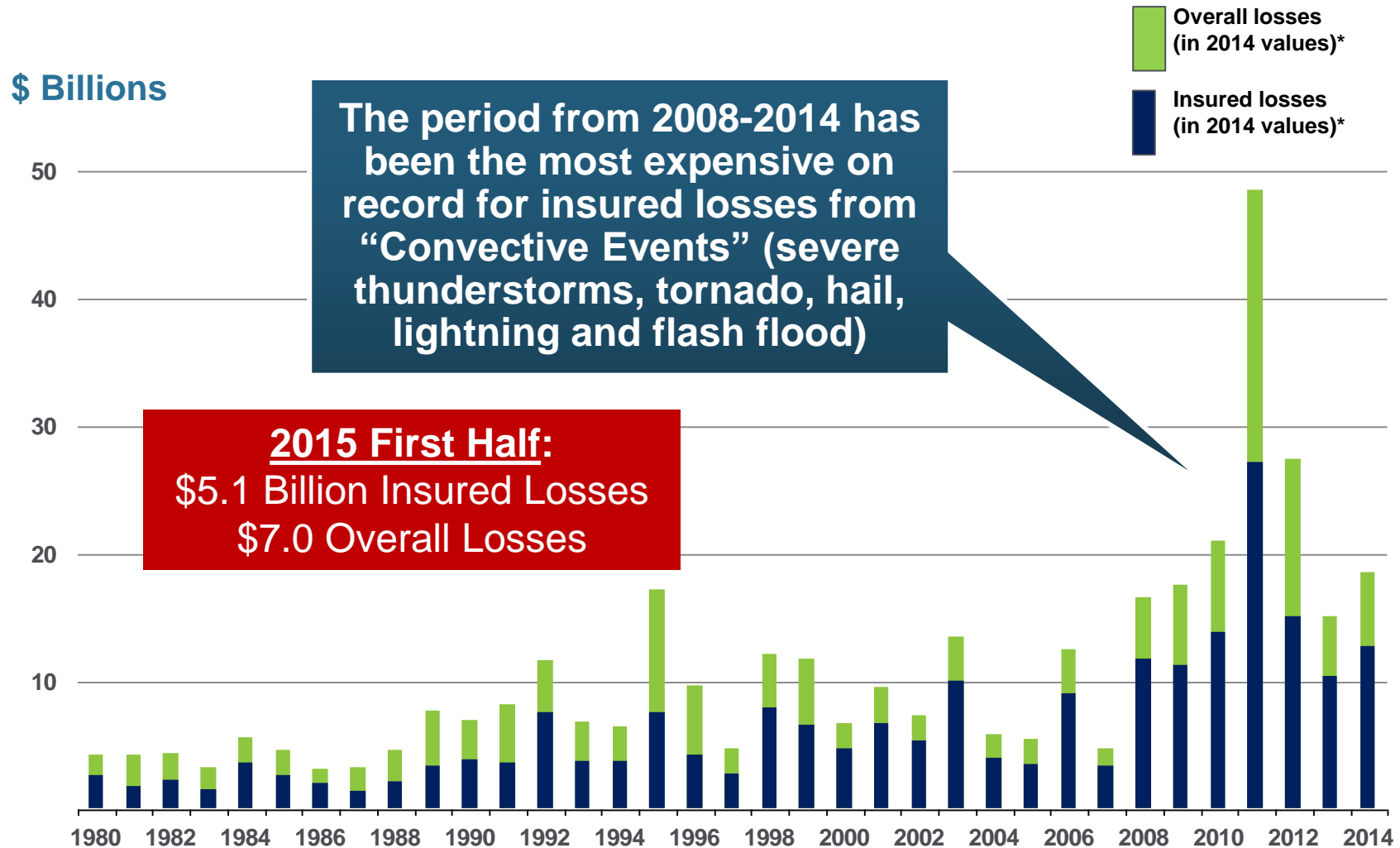
**2015 First Half:  
80 Events**





# 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



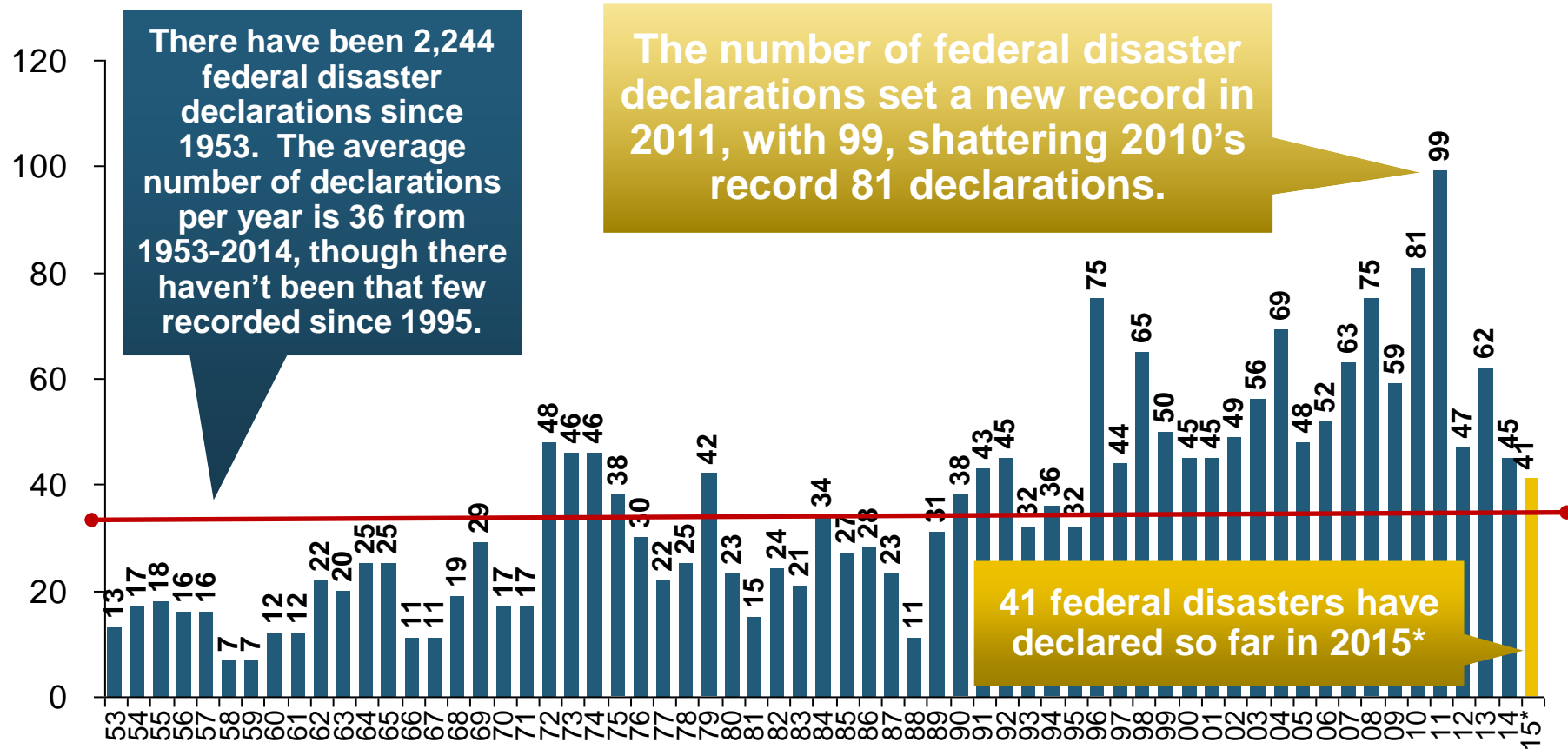


# **Federal Disaster Declarations Patterns: 1953-2015**

**Disaster Declarations Set New  
Records in Recent Years**



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



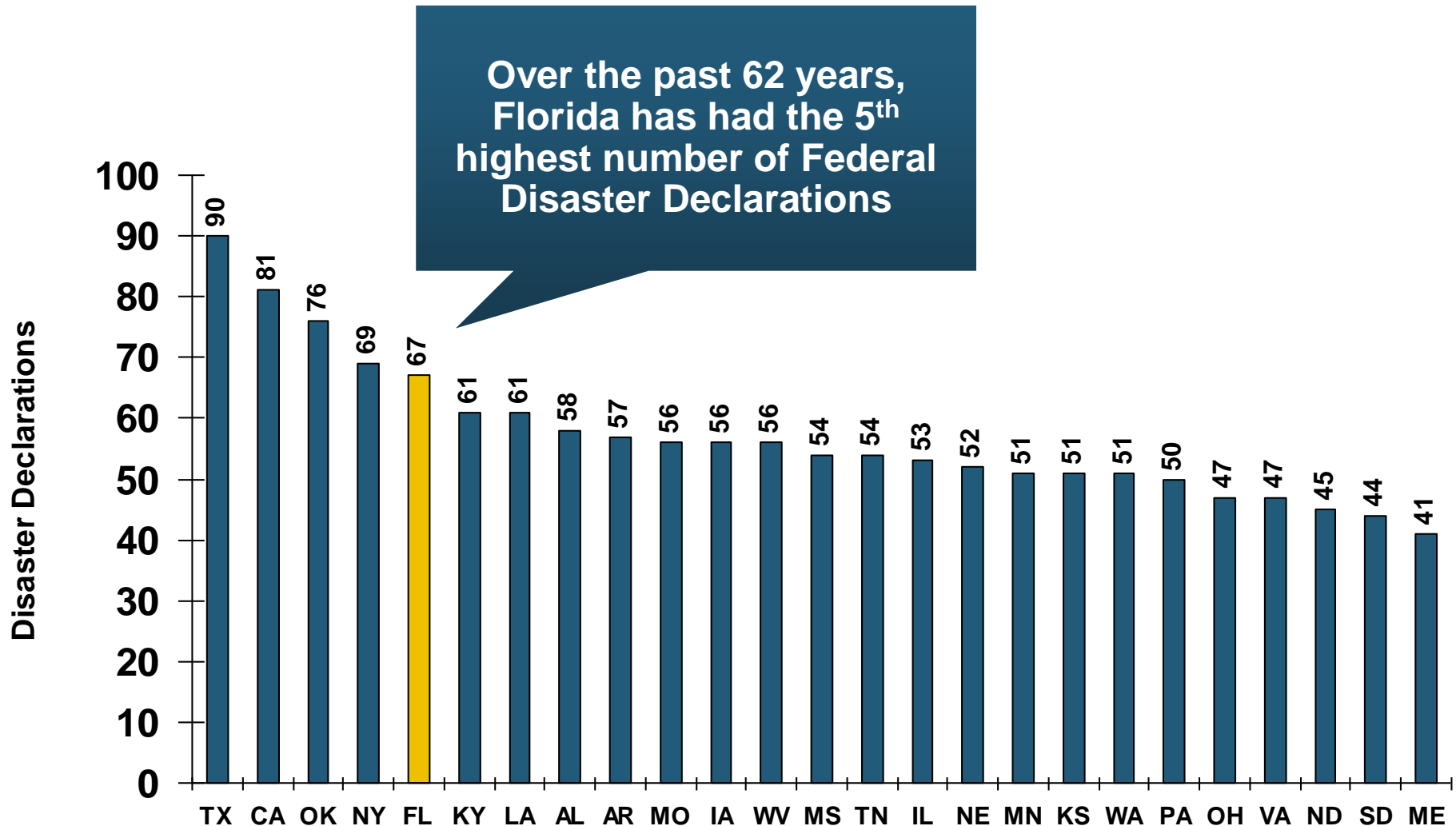
**The Number of Federal Disaster Declarations Is Generally Rising and Set New Records in 2010 *and* 2011 Before Dropping in 2012-2014**

\*Through October 25, 2015.

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



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

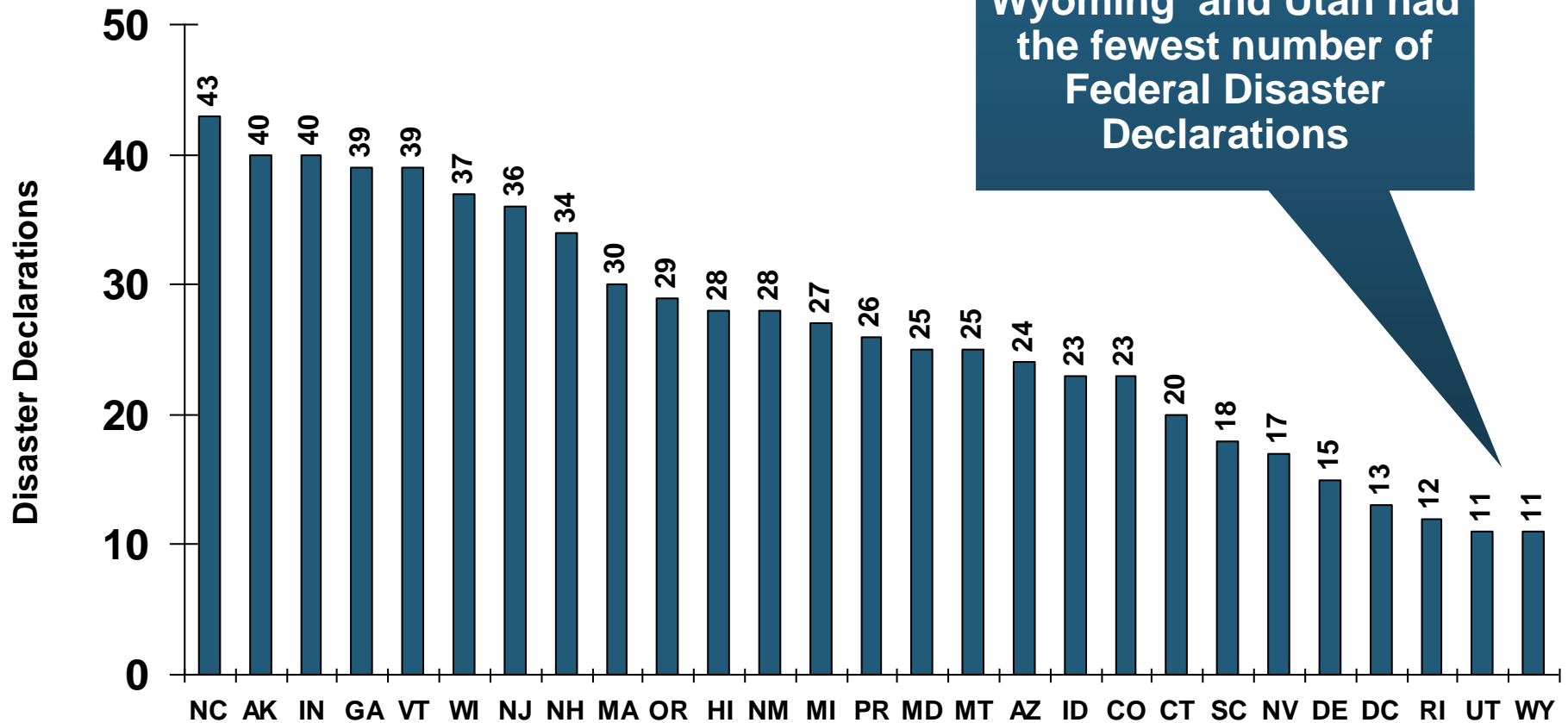


\*Through Oct. 25, 2015. Includes Puerto Rico and the District of Columbia.

Source: FEMA: <http://www.fema.gov/disasters>; Insurance Information Institute.



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



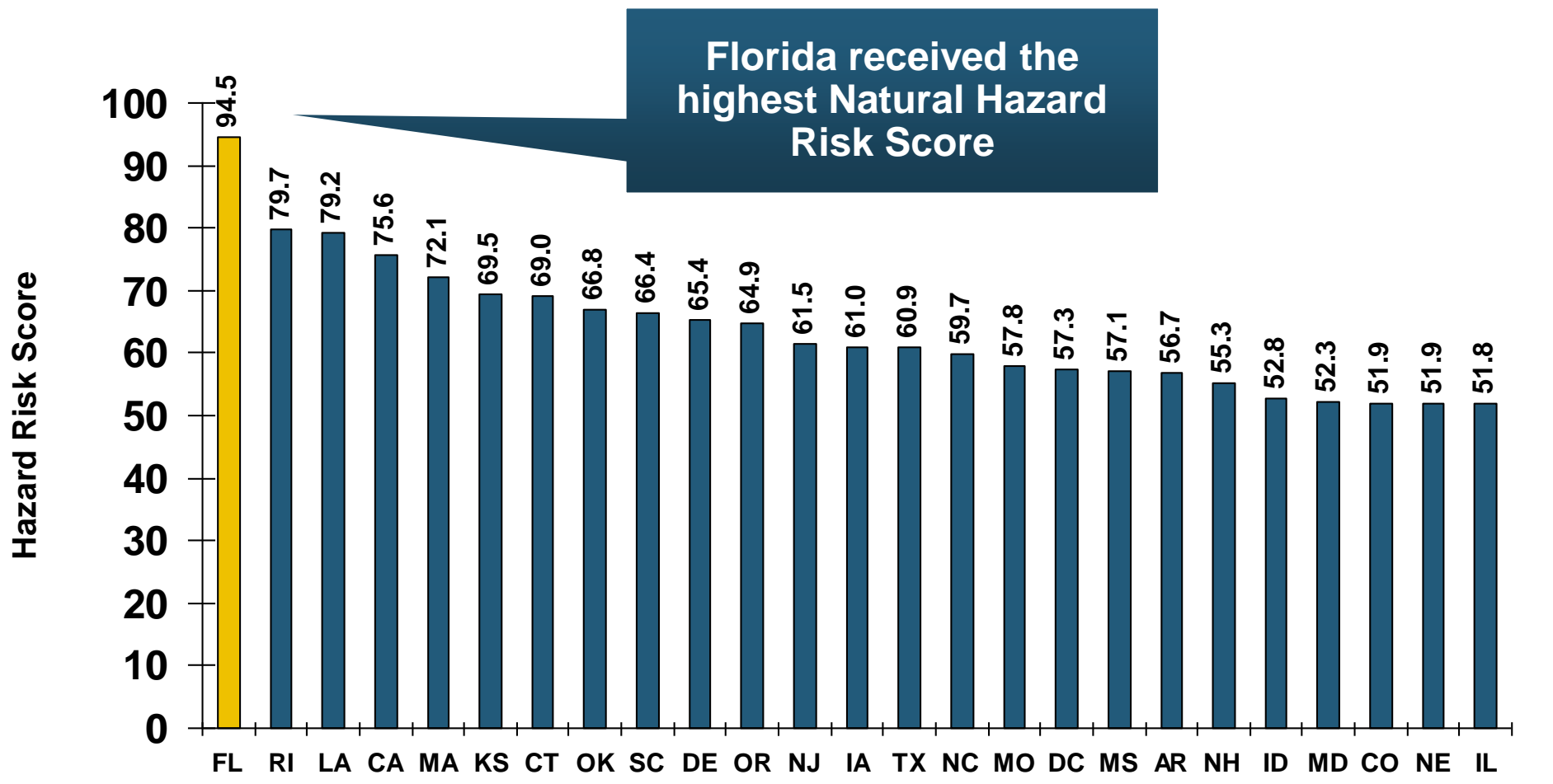
\*Through Oct. 25, 2015. Includes Puerto Rico and the District of Columbia.

Source: FEMA: <http://www.fema.gov/disasters>; 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.

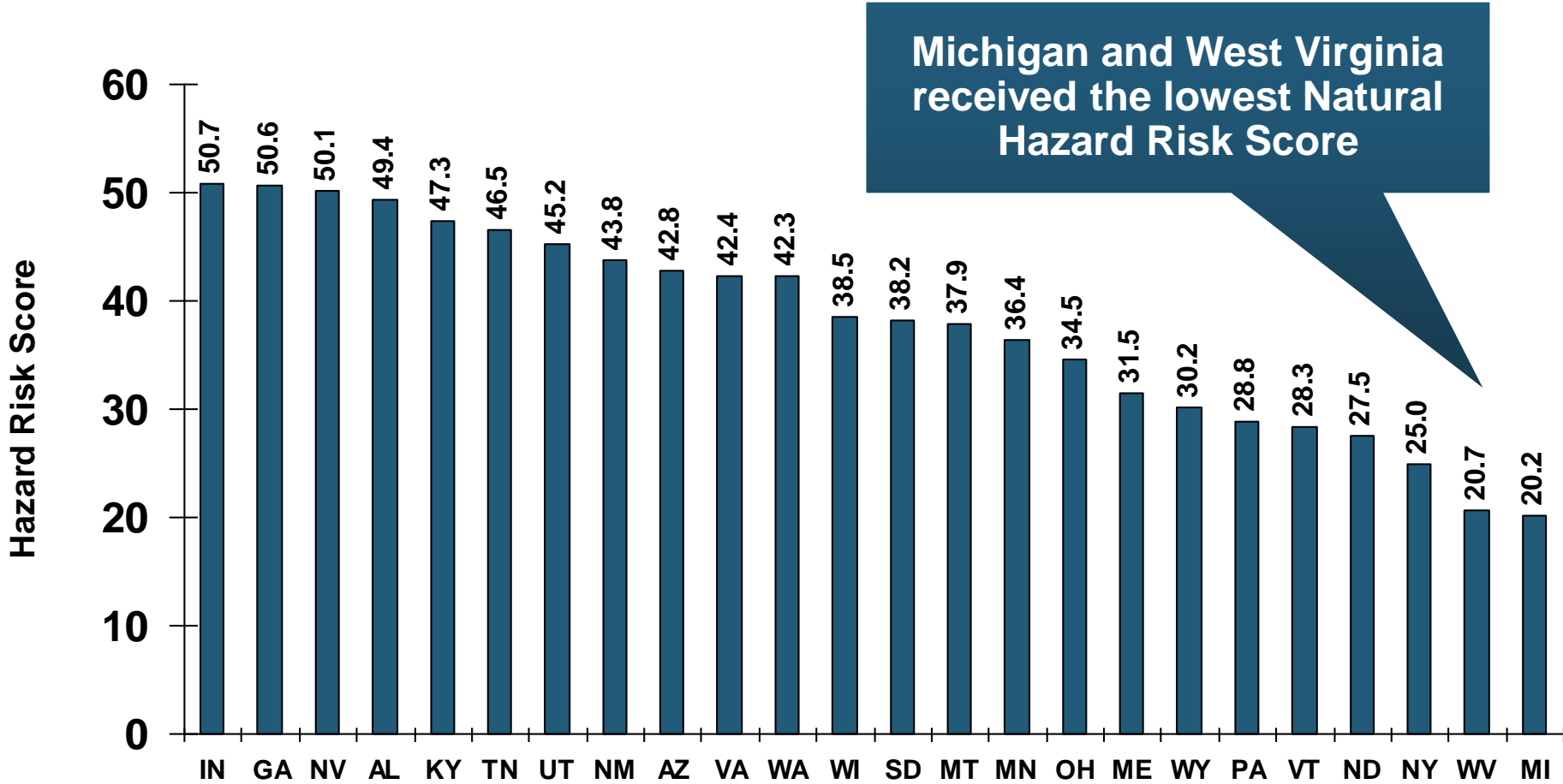
Sources: CoreLogic release "CoreLogic Identifies US States at Highest Risk of Property Damage Loss from Natural Hazards," Sept. 10, 2014; Insurance Information Institute.

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# 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.





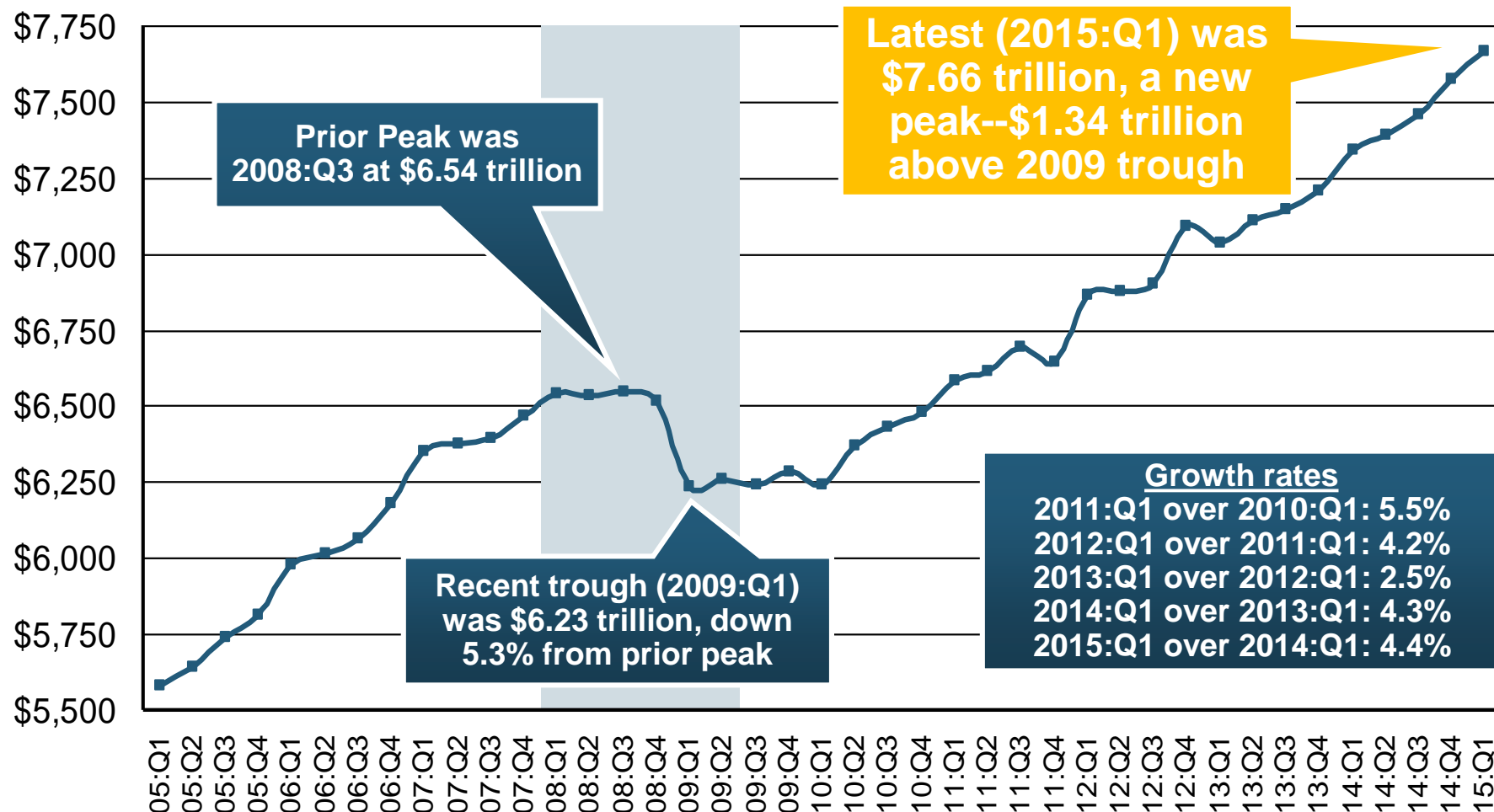
# **Workers Compensation Operating Environment**

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



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

Billions



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

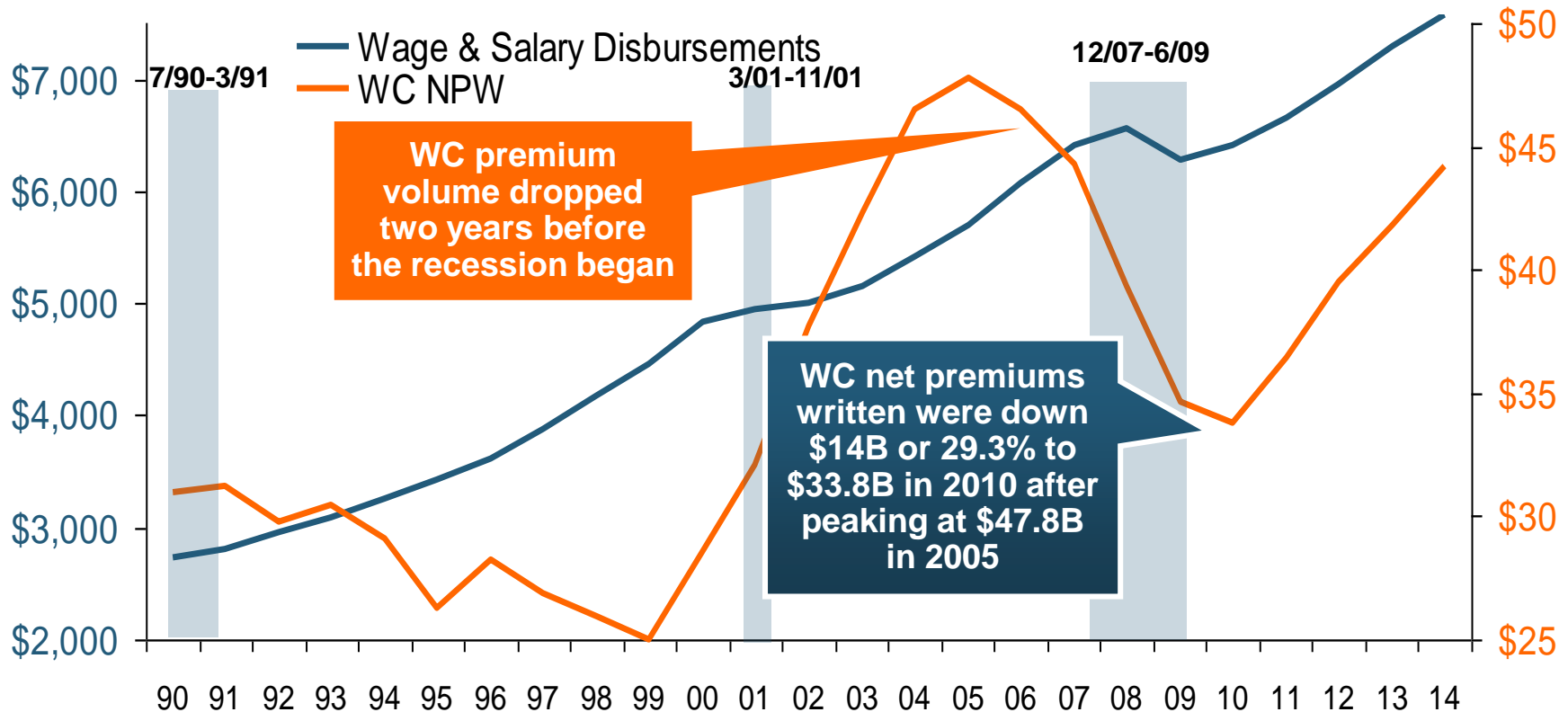
Sources: <http://research.stlouisfed.org/fred2/series/WASCUR>; National Bureau of Economic Research (recession dates); Insurance Information Institute.



# Payroll vs. Workers Comp Net Written Premiums, 1990-2014P

**Payroll Base\***  
**\$Billions**

**WC NWP**  
**\$Billions**



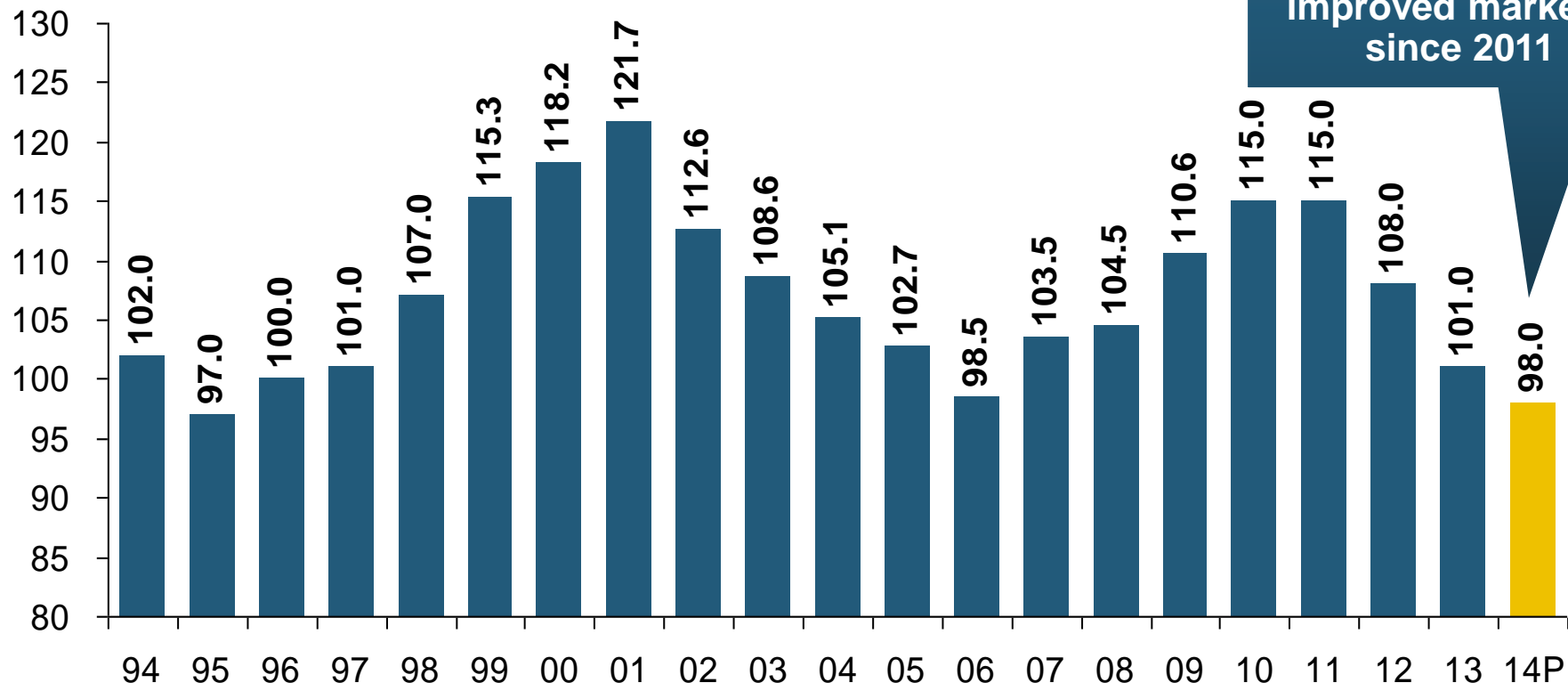
**Continued Payroll Growth and Rate Gains Suggest WC NWP Will Grow Again in 2015**

\*Private employment; Shaded areas indicate recessions. WC premiums for 2014 are from NCCI.

Sources: NBER (recessions); Federal Reserve Bank of St. Louis at <http://research.stlouisfed.org/fred2/series/WASCUR> ; NCCI; I.I.I.



# Workers Compensation Combined Ratio: 1994–2014P



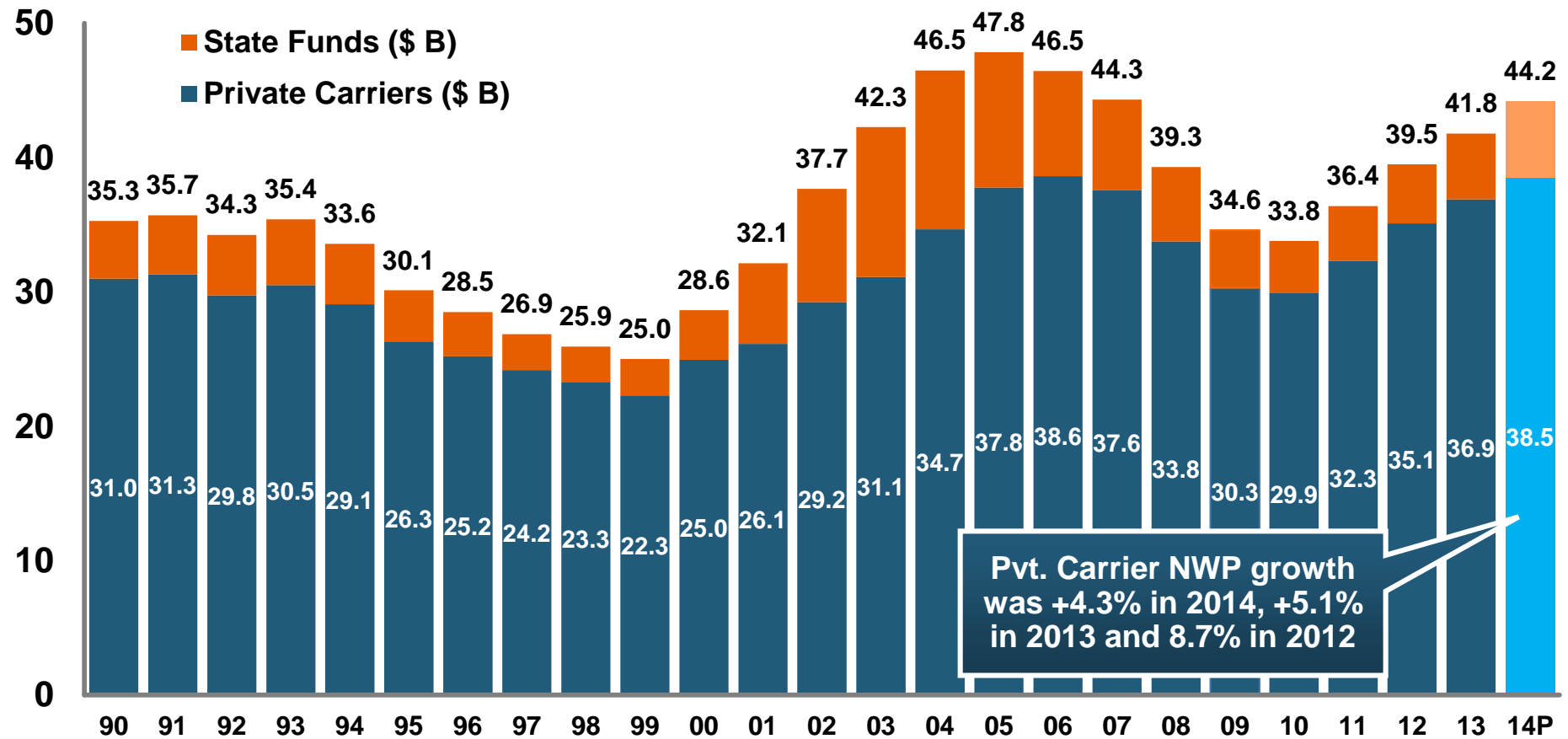
**Workers Comp Results Began to Improve in 2012.  
Underwriting Results Deteriorated Markedly from 2007-  
2010/11 and Were the Worst They Had Been in a Decade.**



# Workers Compensation Premium: Fourth Consecutive Year of Increase

## Net Written Premium

\$ Billions



p Preliminary

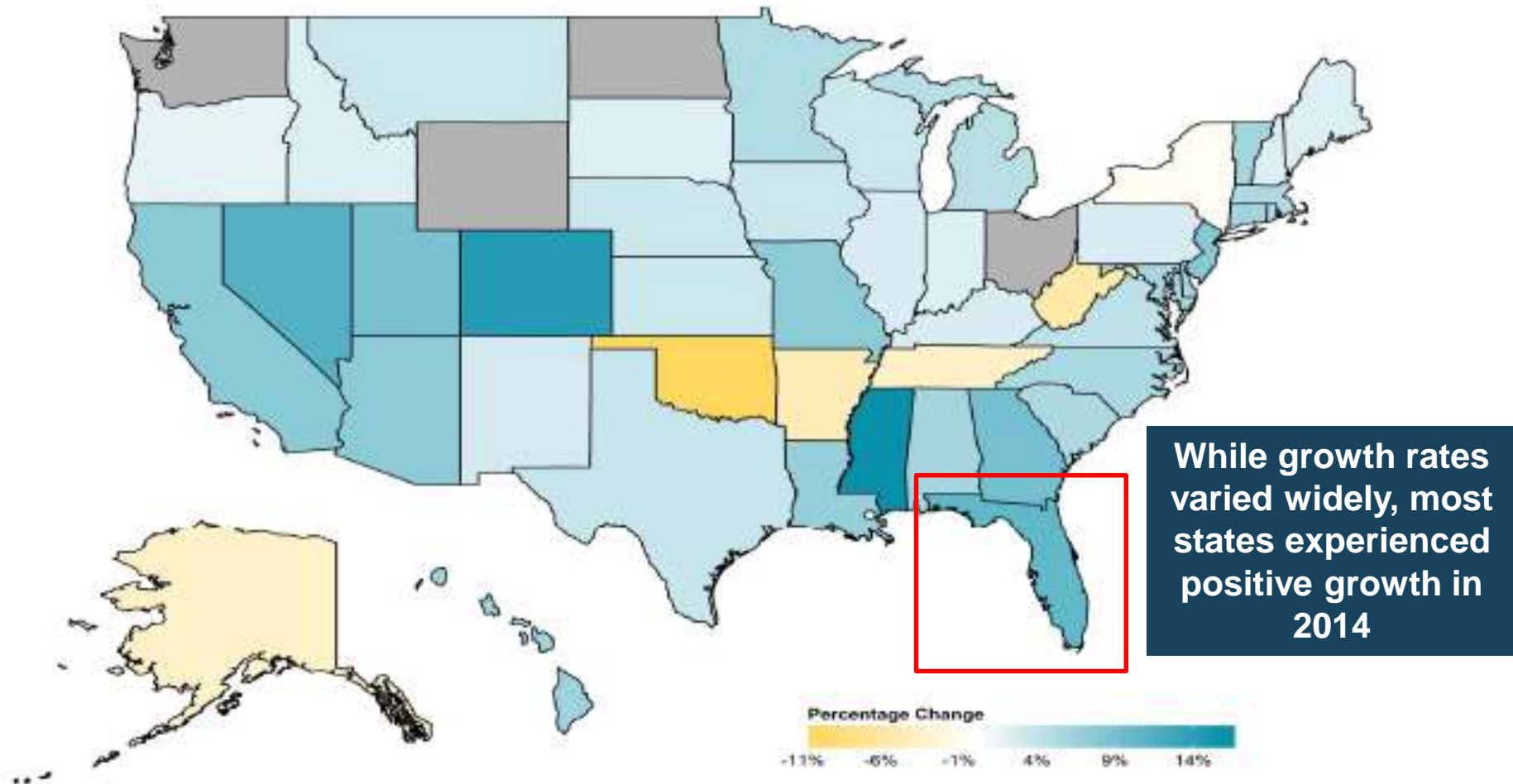
Source: NCCI from Annual Statement Data.

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.

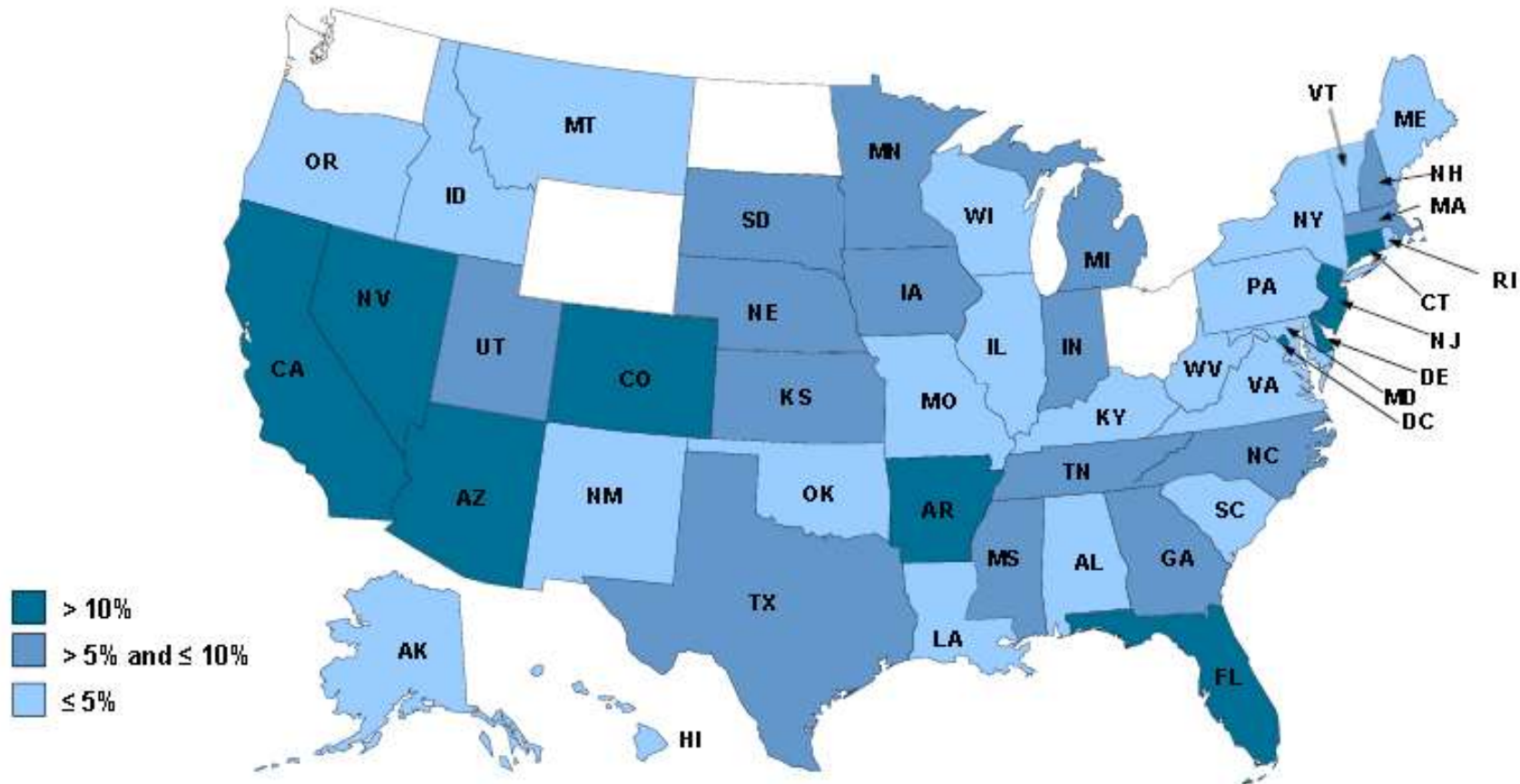
Source: NCCI.



# 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 2014

<b>Net Written Premium—Countrywide</b>	<b>+4.6%</b>
<b>Direct Written Premium—Countrywide</b>	<b>+4.6%</b>
<b>Direct Written Premium—NCCI States</b>	<b>+4.5%</b>
<b>Components of DWP Change for NCCI States</b>	
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%
<b>Combined Effect</b>	<b>+4.5%</b>

**Growth  
is now  
almost  
entirely  
payroll  
driven**

Sources: Countrywide: Annual Statement data.

NCCI States: Annual Statement Statutory Page 14 for all states where NCCI provides ratemaking services.

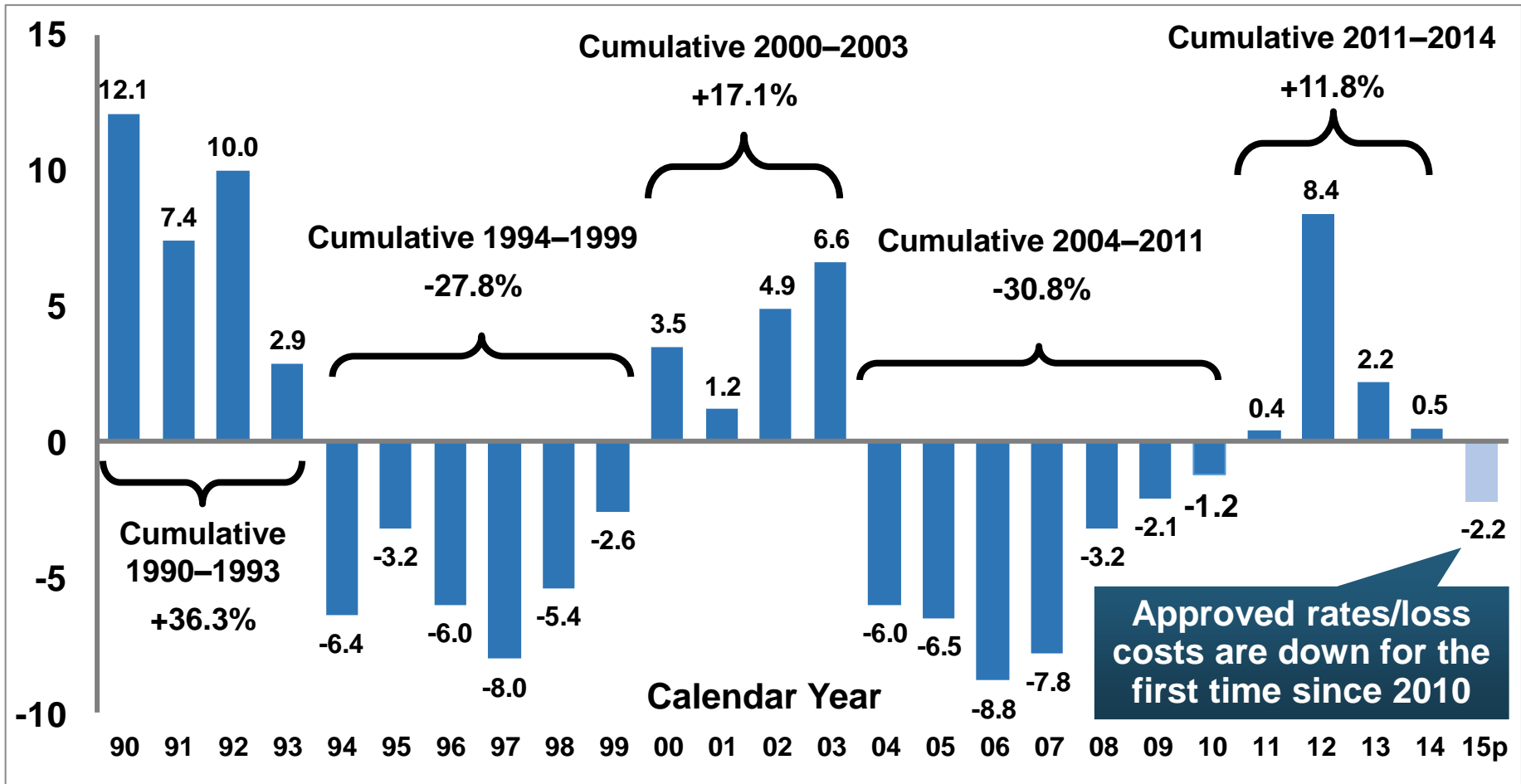
Components: NCCI Policy data.



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

By Effective Date for Total Market

Percent



\*States approved through 4/24/15.

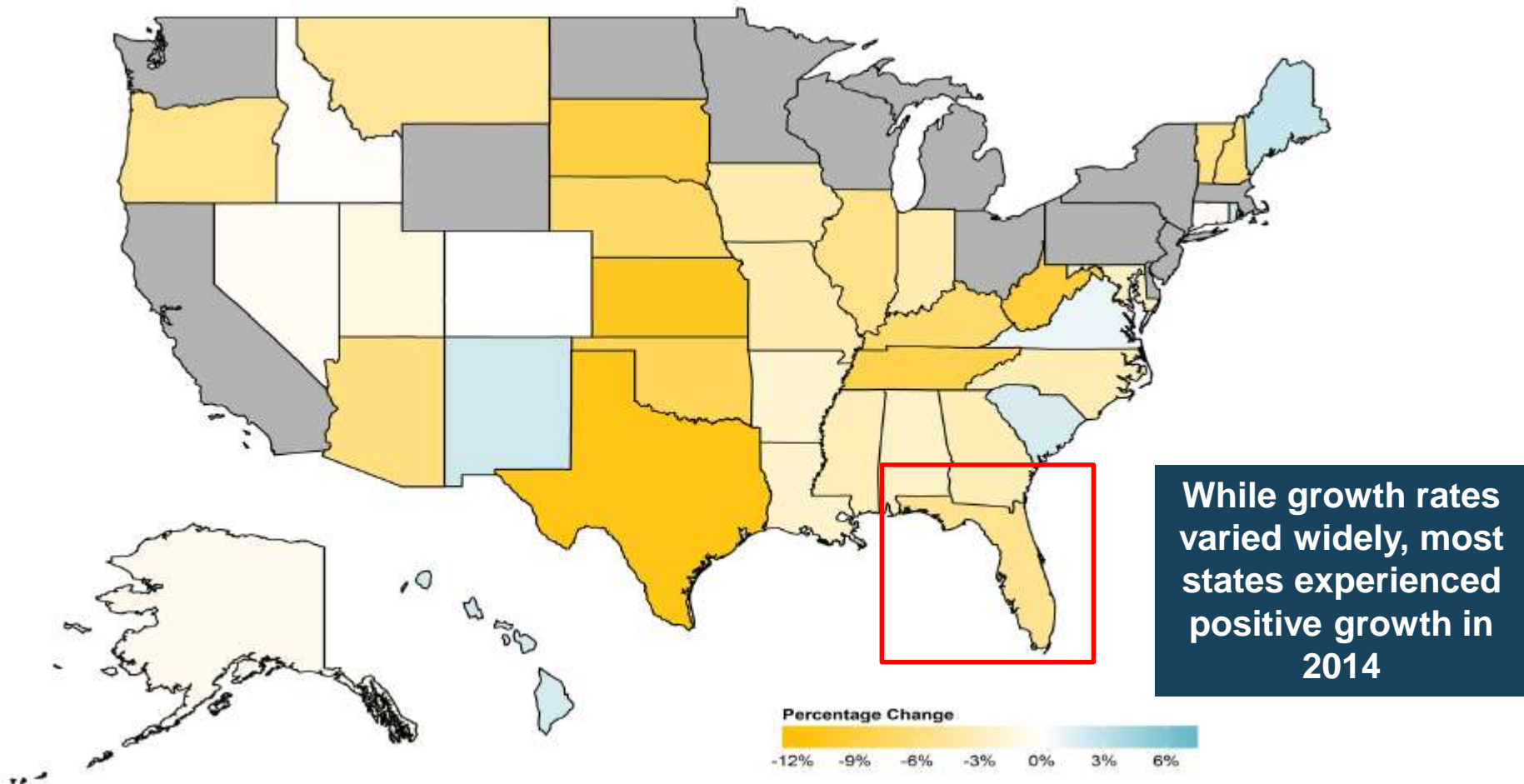
Note: Bureau premium level changes are countrywide approved changes in advisory rates, loss costs and assigned risk rates as filed by applicable rating organization, relative to those previously approved.

Source: NCCI.



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

## Latest Change for Voluntary Market



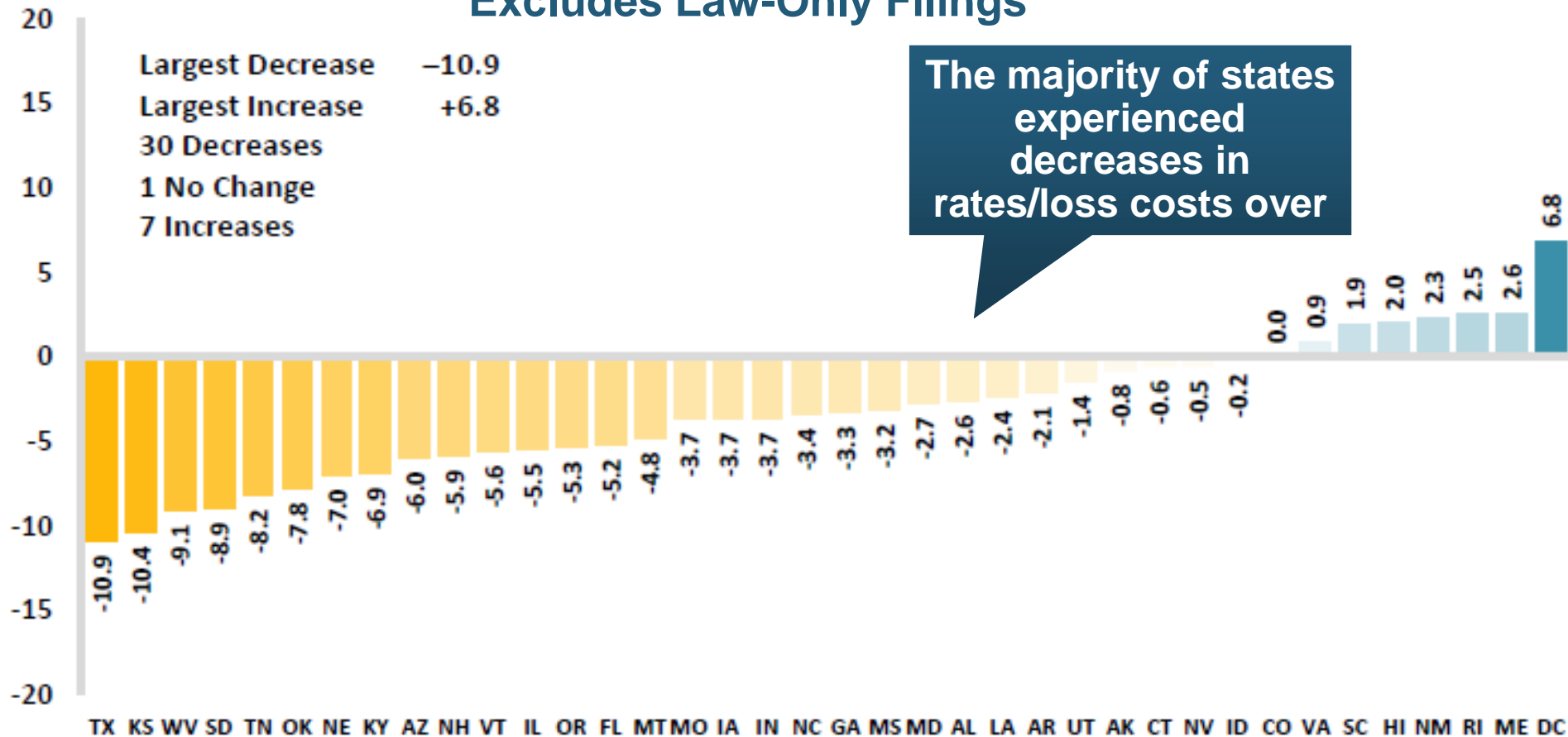
\*Excludes monopolistic fund states (in gray): OH, ND, WA and WY.

Source: NCCI.



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

## Latest Change for Voluntary Market Excludes Law-Only Filings

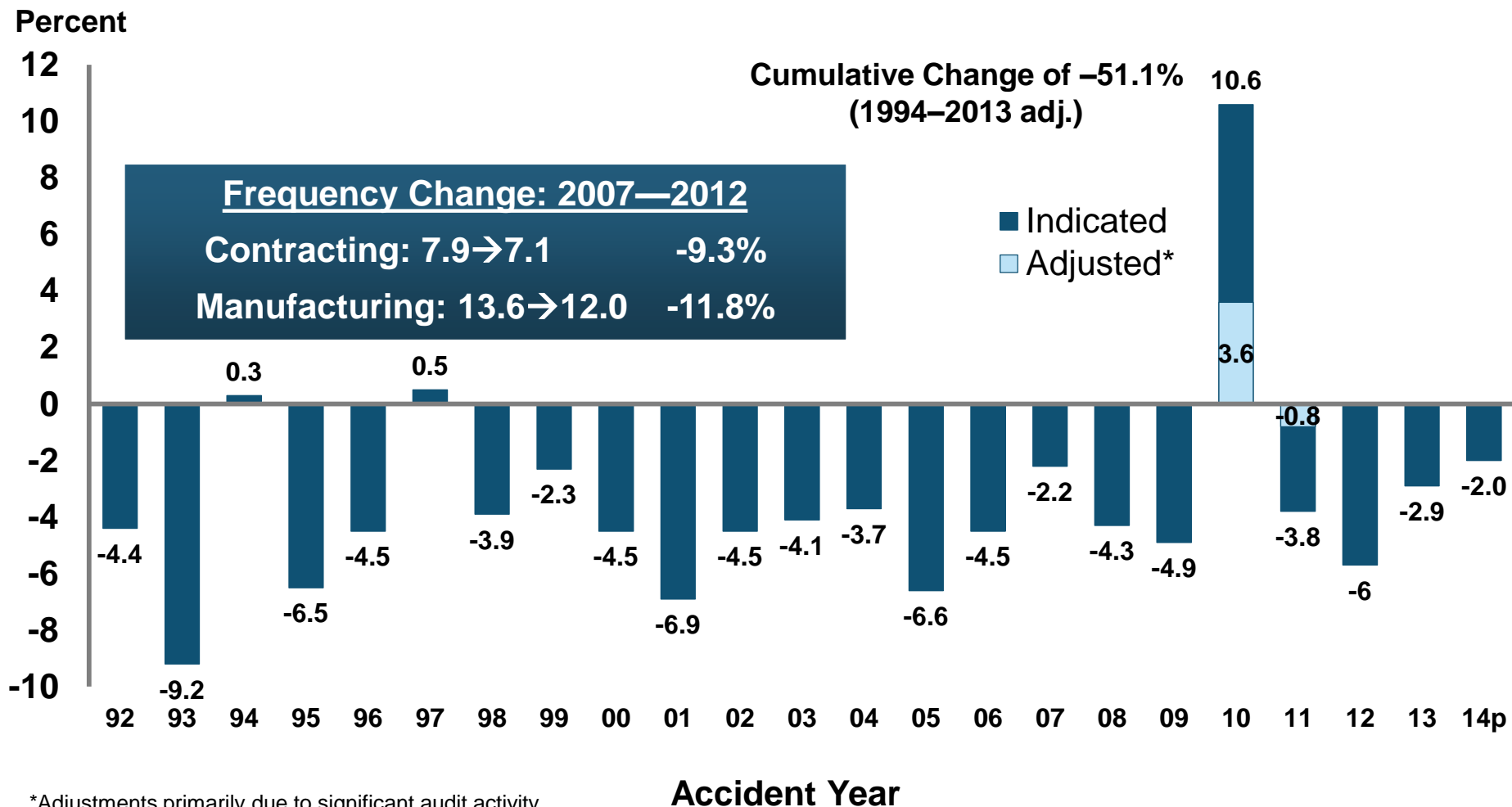


Note: Premium level changes are approved changes are approved or filed and pending changes in advisory rates, loss costs and rating values as of 4/24/15 as filed by applicable rating organization, relative to those previously approved. SC is filed and pending. IN and NC are in cooperation with state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

Source: NCCI.



# Workers Compensation Lost-Time Claim Frequency Declined in 2014



\*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 and 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

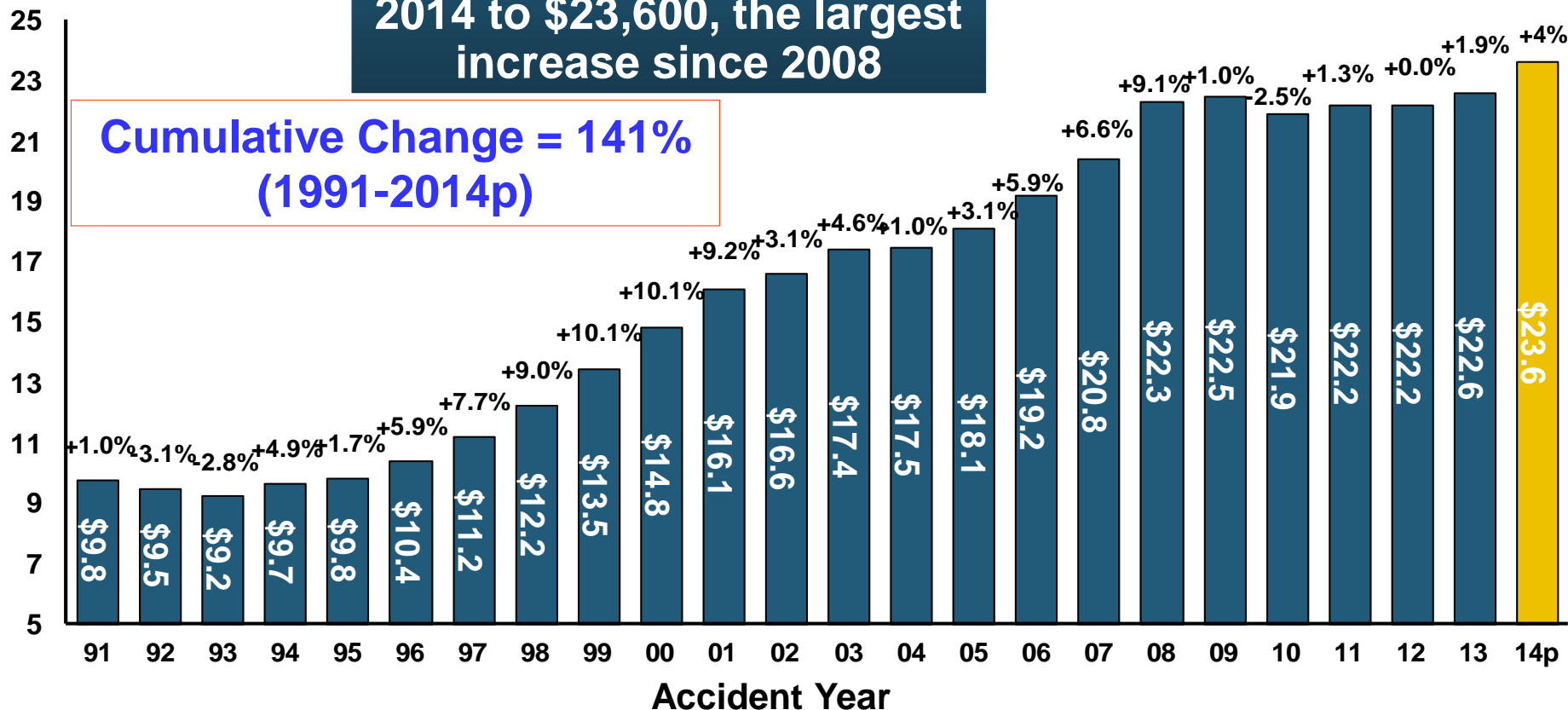


# Workers Comp Indemnity Claim Costs: Modest Increase in 2014

## Average Indemnity Cost per Lost-Time Claim

Average indemnity costs per claim were up 4% in 2014 to \$23,600, the largest increase since 2008

Cumulative Change = 141%  
(1991-2014p)



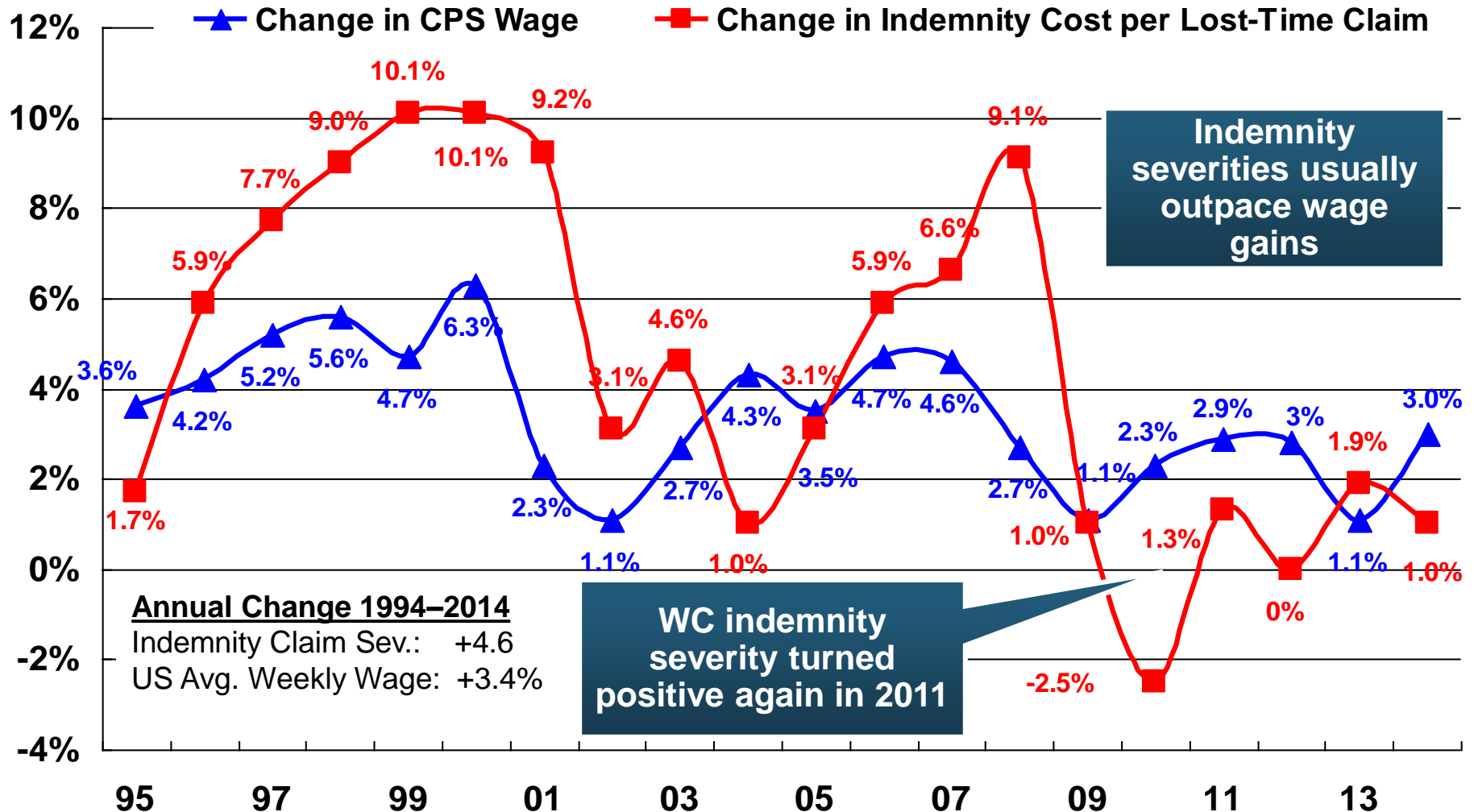
2014p: Preliminary based on data valued as of 12/31/2014.

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, 1995 -2014p

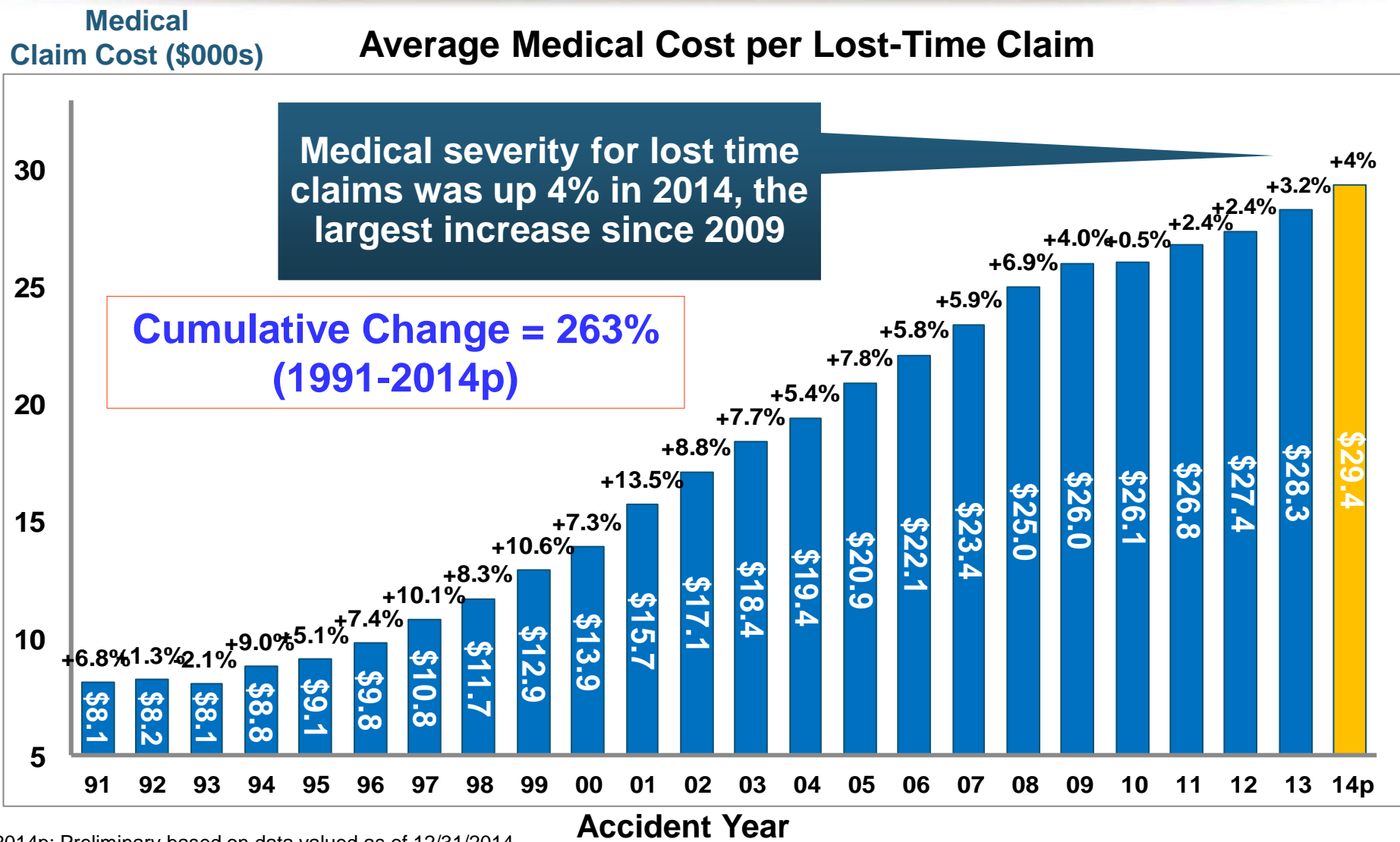


2014p: Preliminary based on data valued as of 12/31/2014; 1991-2010: Based on data through 12/31/2010, developed to ultimate. Based on the states where NCCI provides ratemaking services. Excludes the effects of deductible policies. CPS = Current Population Survey.

Source: NCCI



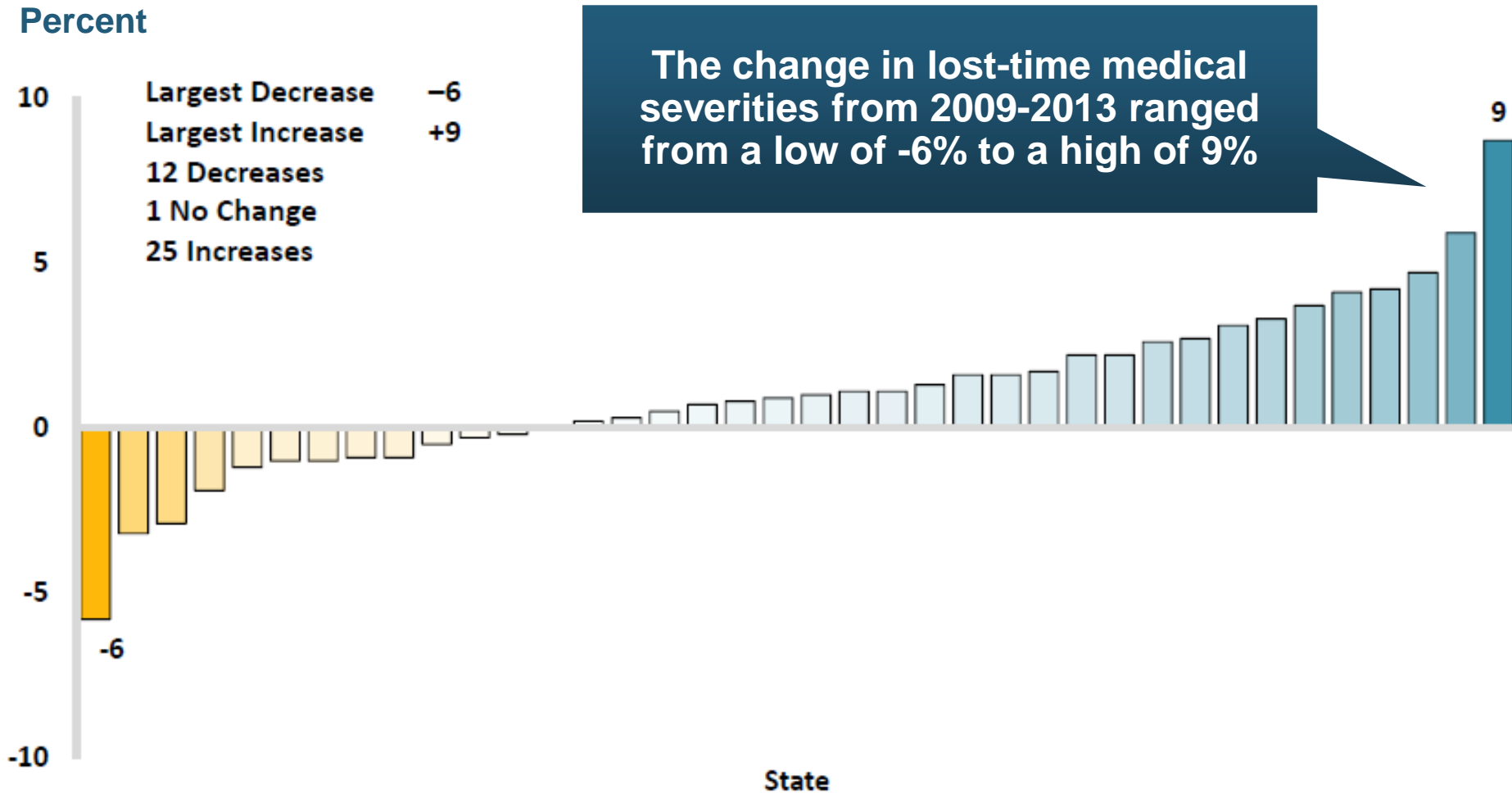
# Workers Compensation Medical Severity: Moderate Increase in 2014



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](http://ncci.com).

Values reflect methodology and state data underlying the most recent rate/lost cost filing.

TX changes are for the years 2010-2013.



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

## Annual Inflation Rates (%)



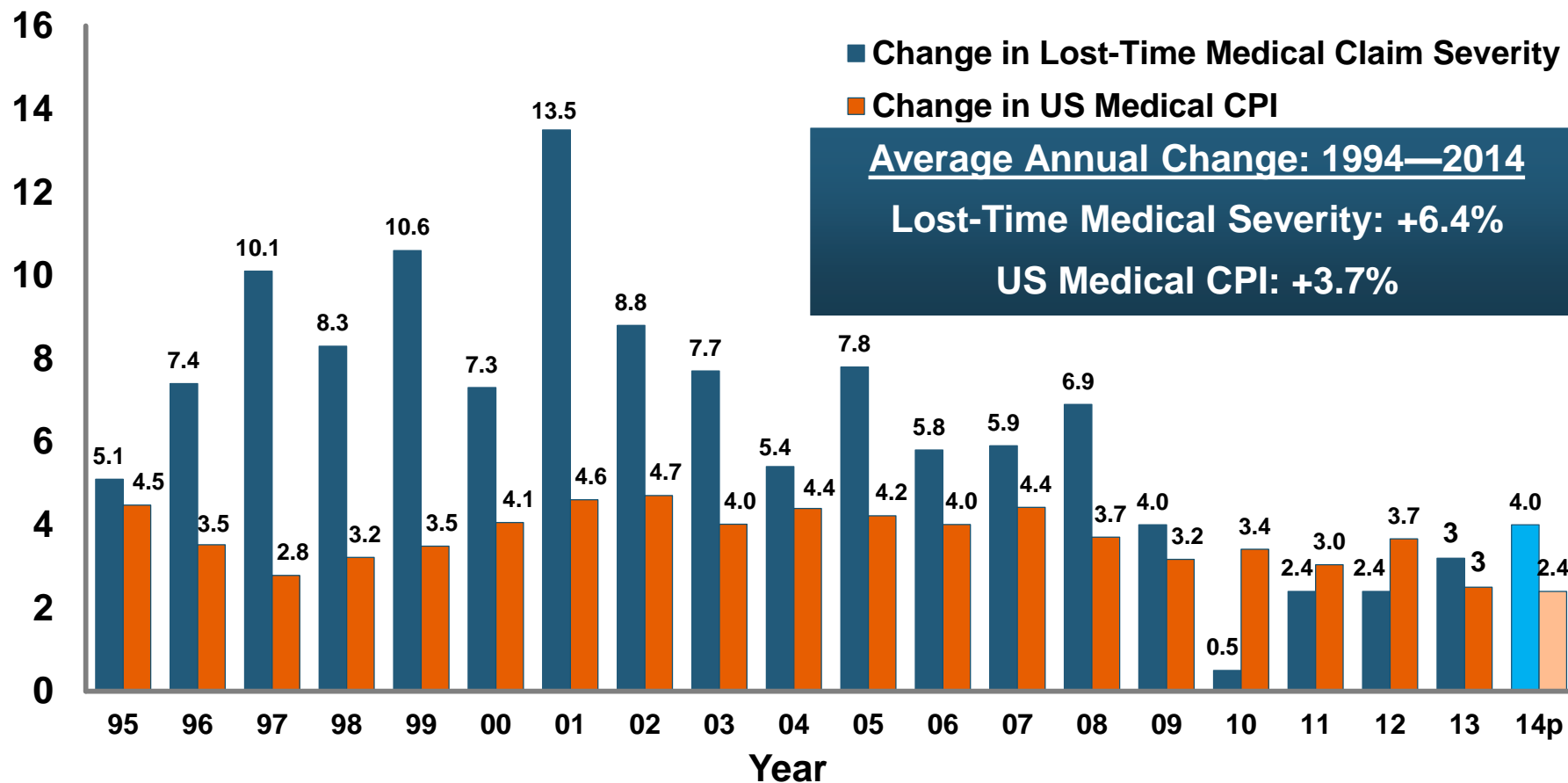
**Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times**



# 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.

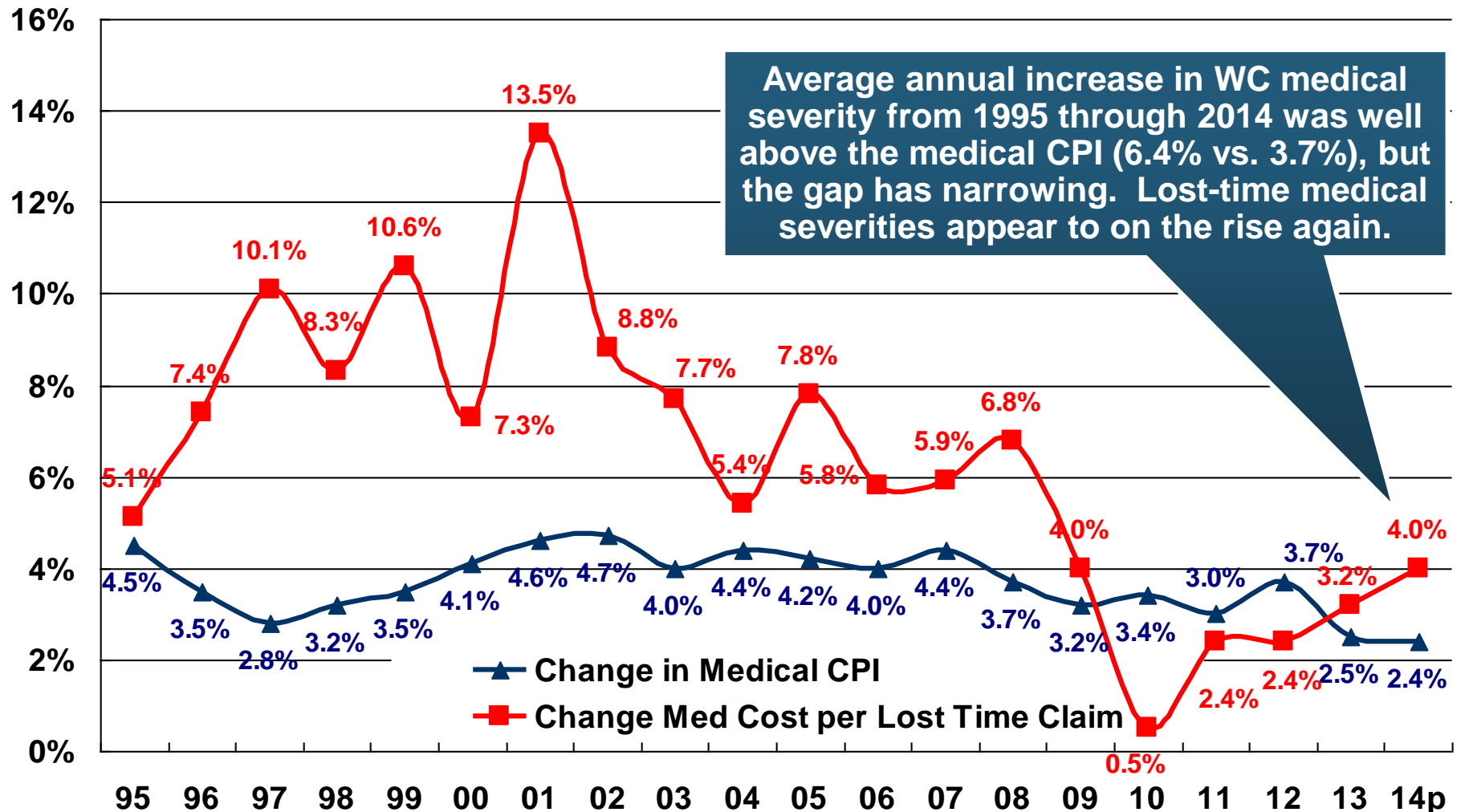
Sources: Severity: 1995-2013: Based on data through 12/31/2013, developed to ultimate

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.

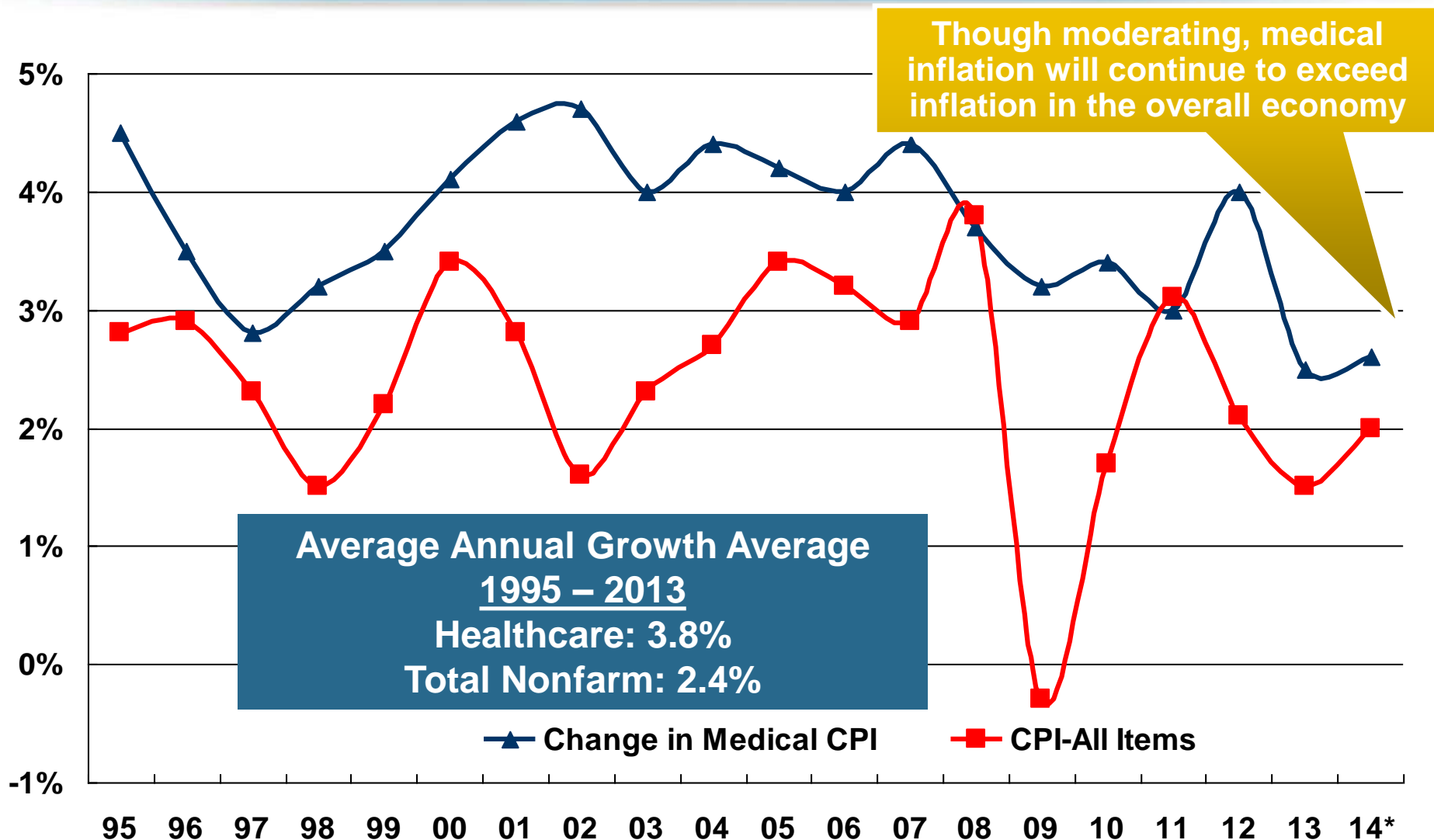


# WC Medical Severity Generally Outpaces the Medical CPI Rate





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



\*July 2014 compared to July 2013.

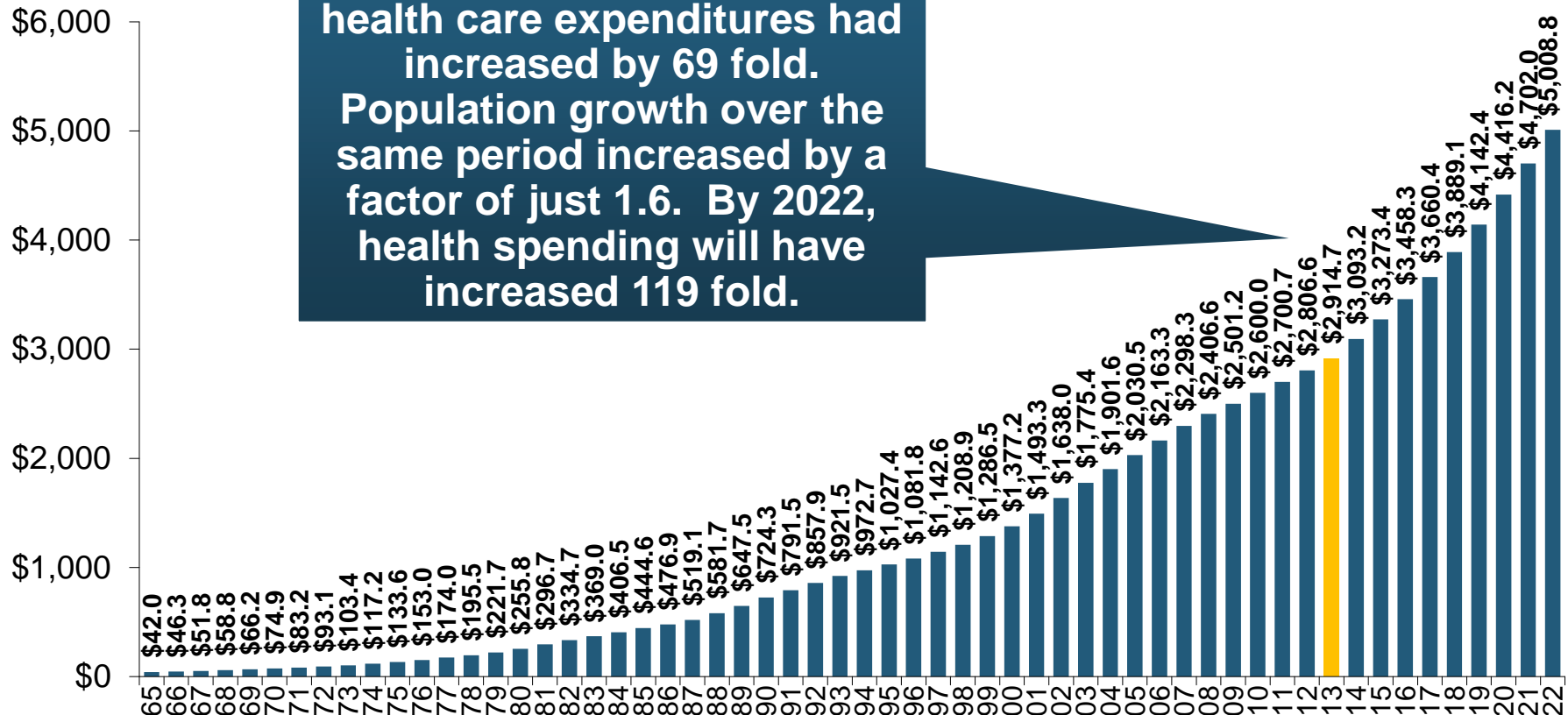
Sources: Med CPI from US Bureau of Labor Statistics, WC med severity from NCCI based on NCCI states.



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

\$ Billions

From 1965 through 2013, US health care expenditures had increased by 69 fold. Population growth over the same period increased by a factor of just 1.6. By 2022, health spending will have increased 119 fold.

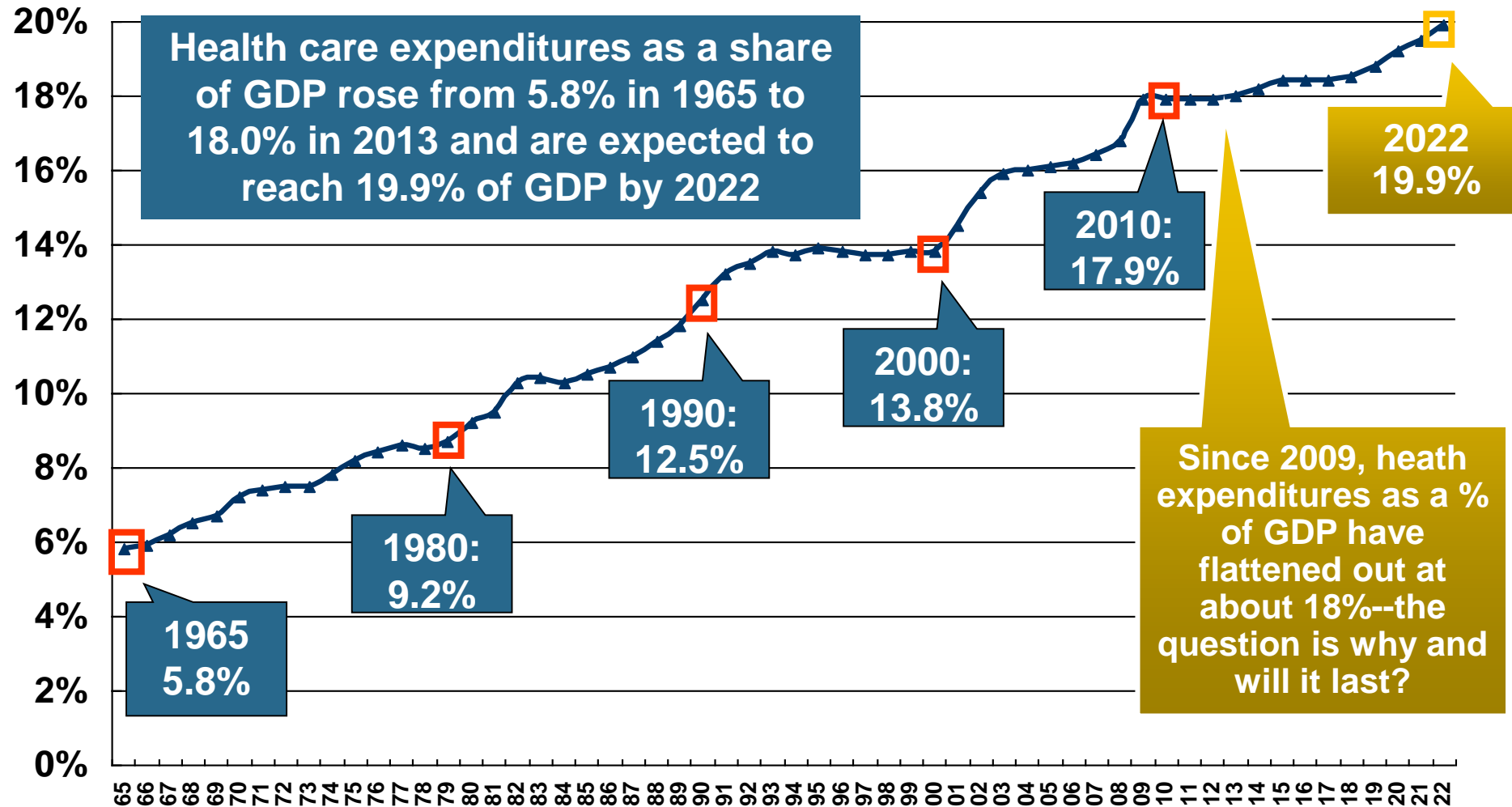


**U.S. health care expenditures have been on a relentless climb for most of the past half century, far outstripping population growth, inflation of GDP growth**



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

% of GDP



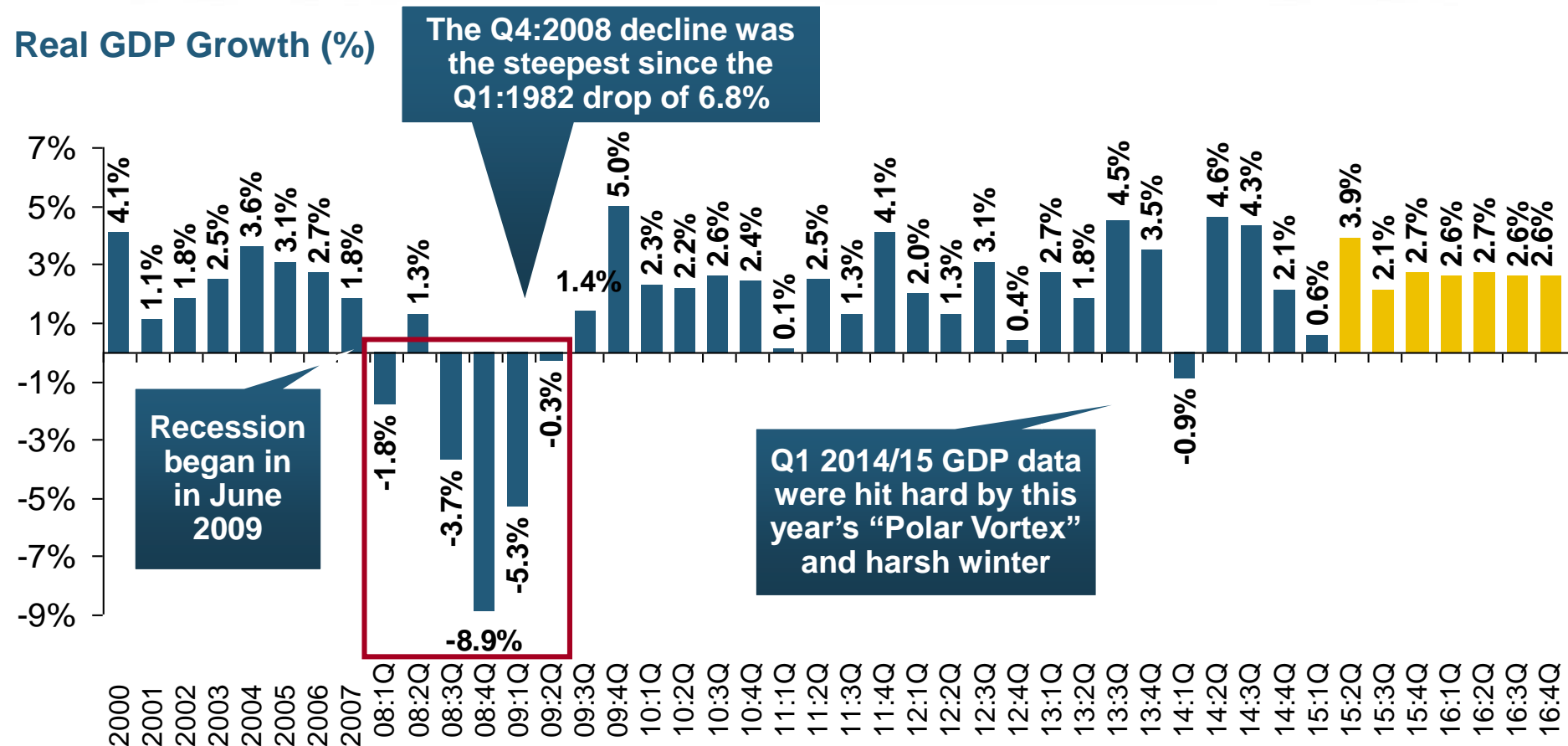


# **THE ECONOMY**

**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**

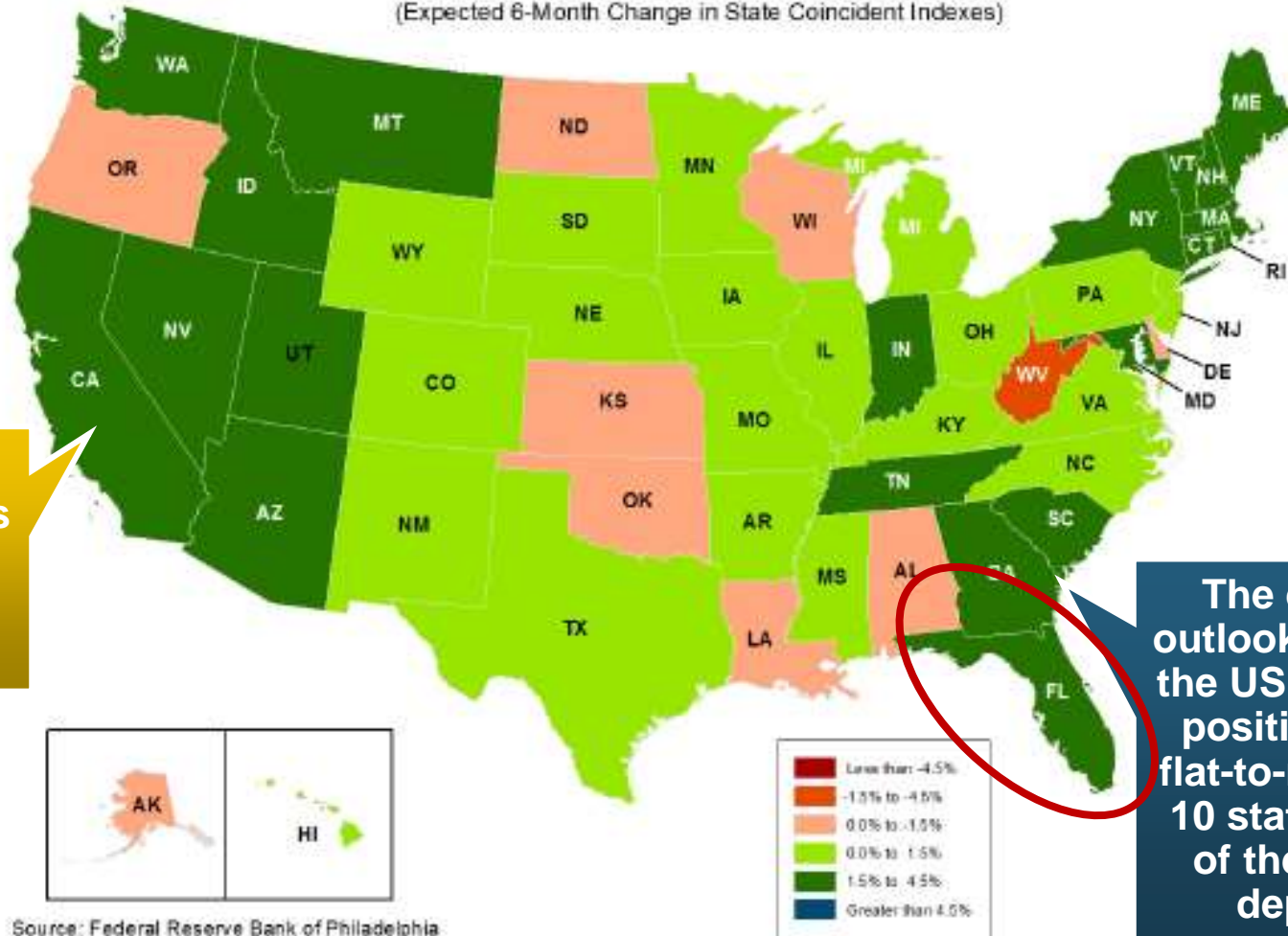
\* Estimates/Forecasts from Blue Chip Economic Indicators.

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



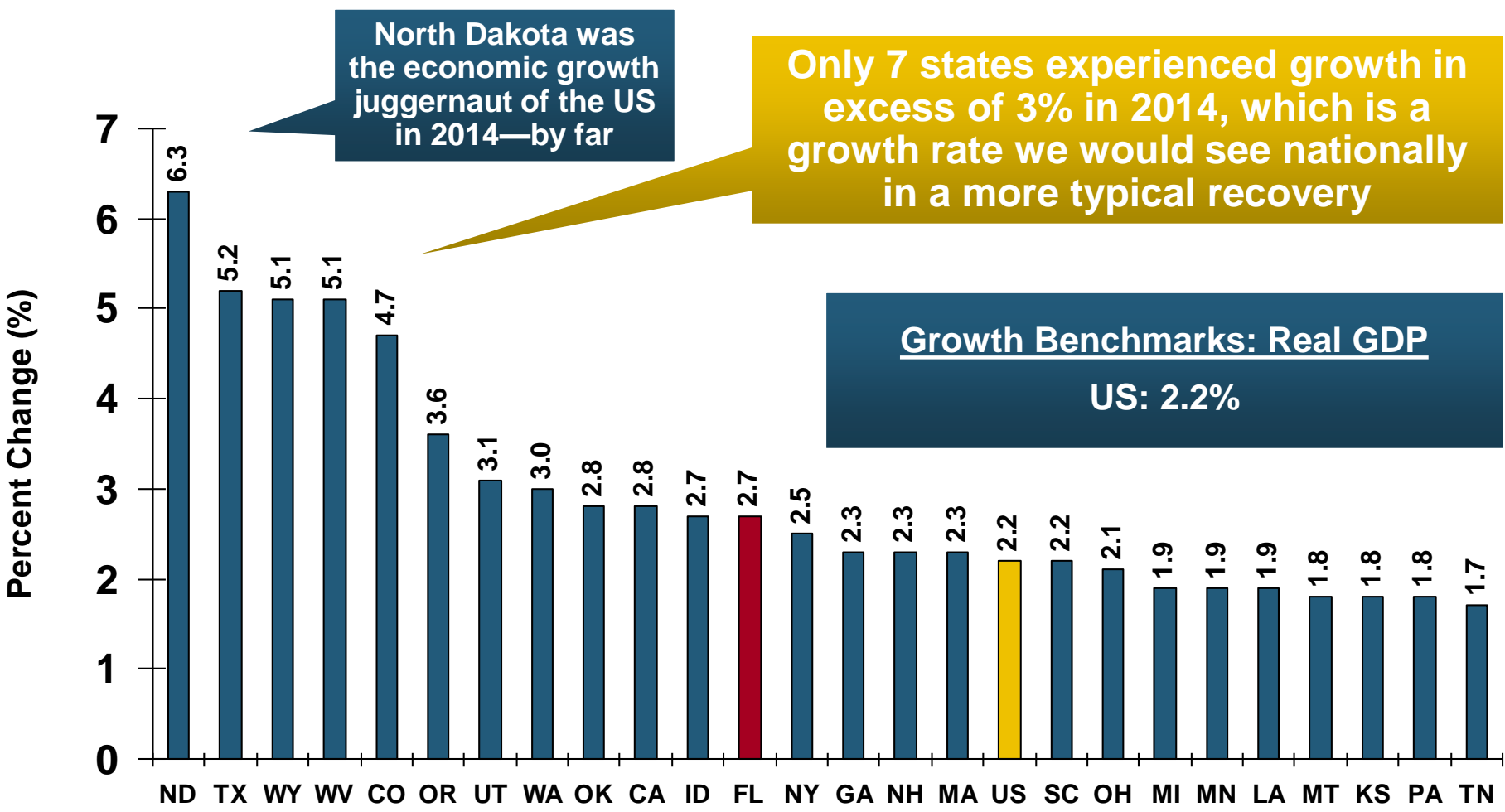
# State Leading Economic Indicators through November 2015

**May 2015 State Leading Indexes**  
(Expected 6-Month Change in State Coincident Indexes)





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

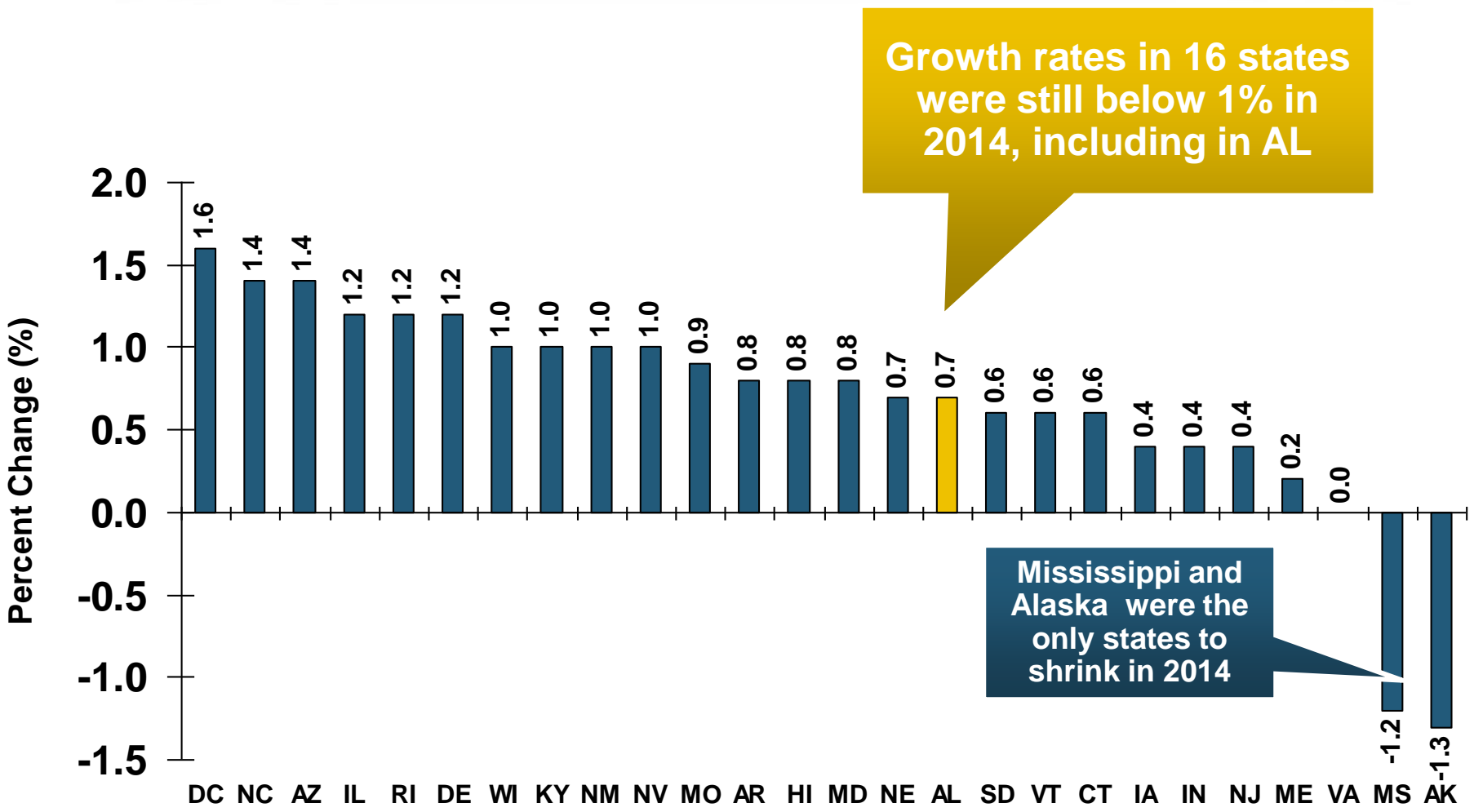


\*Advance statistics  
Sources: [U.S. Bureau of Economic Analysis](#); Insurance Information Institute.



# Real GDP by State Percent Change, 2014\*:

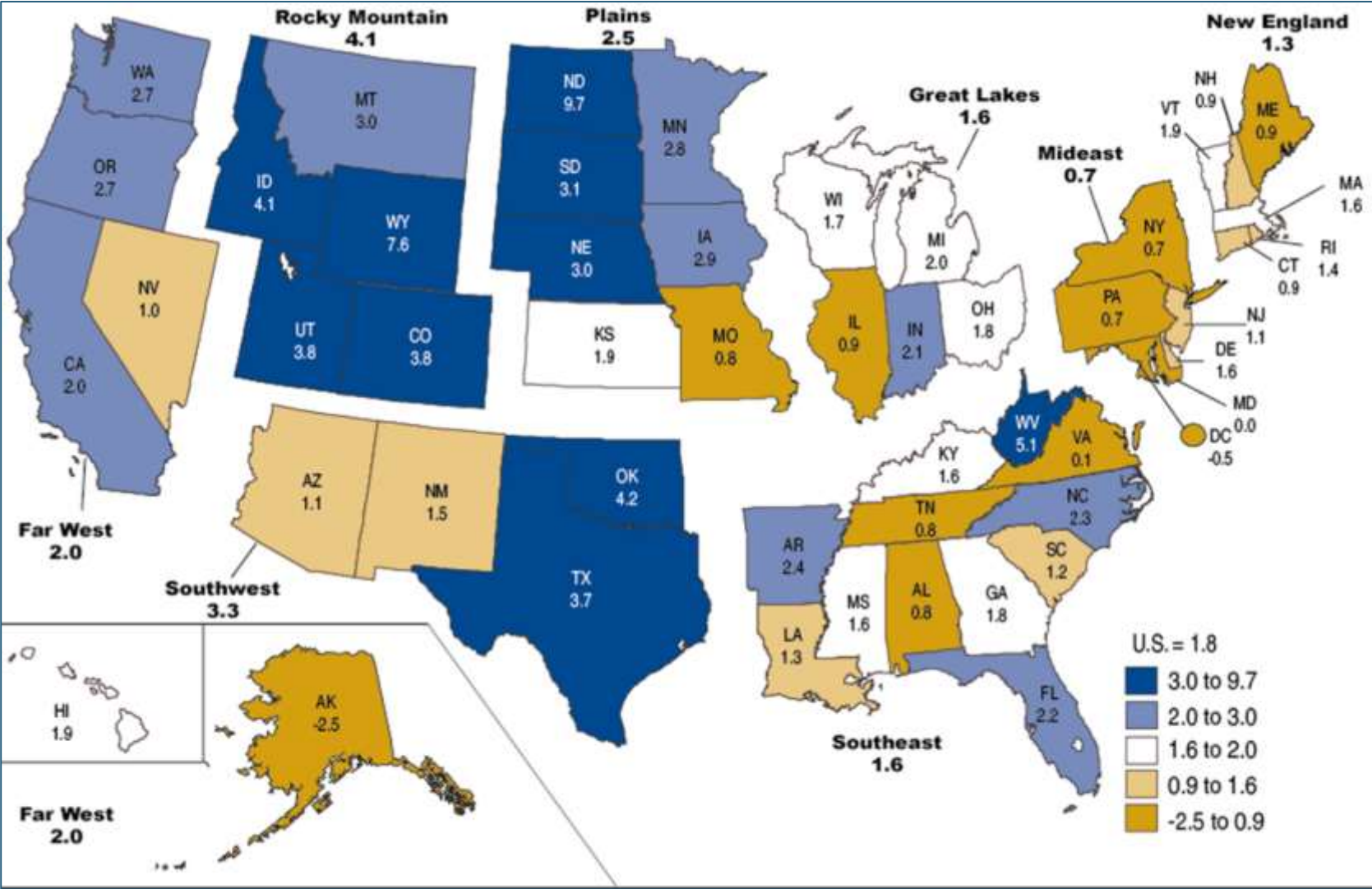
## Lowest 25 States



\*Advance statistics  
Sources: [US Bureau of Economic Analysis](#); Insurance Information Institute.



# Percent Change in Real GDP by State, 2013



Sources: [US Bureau of Economic Analysis](#); Insurance Information Institute.



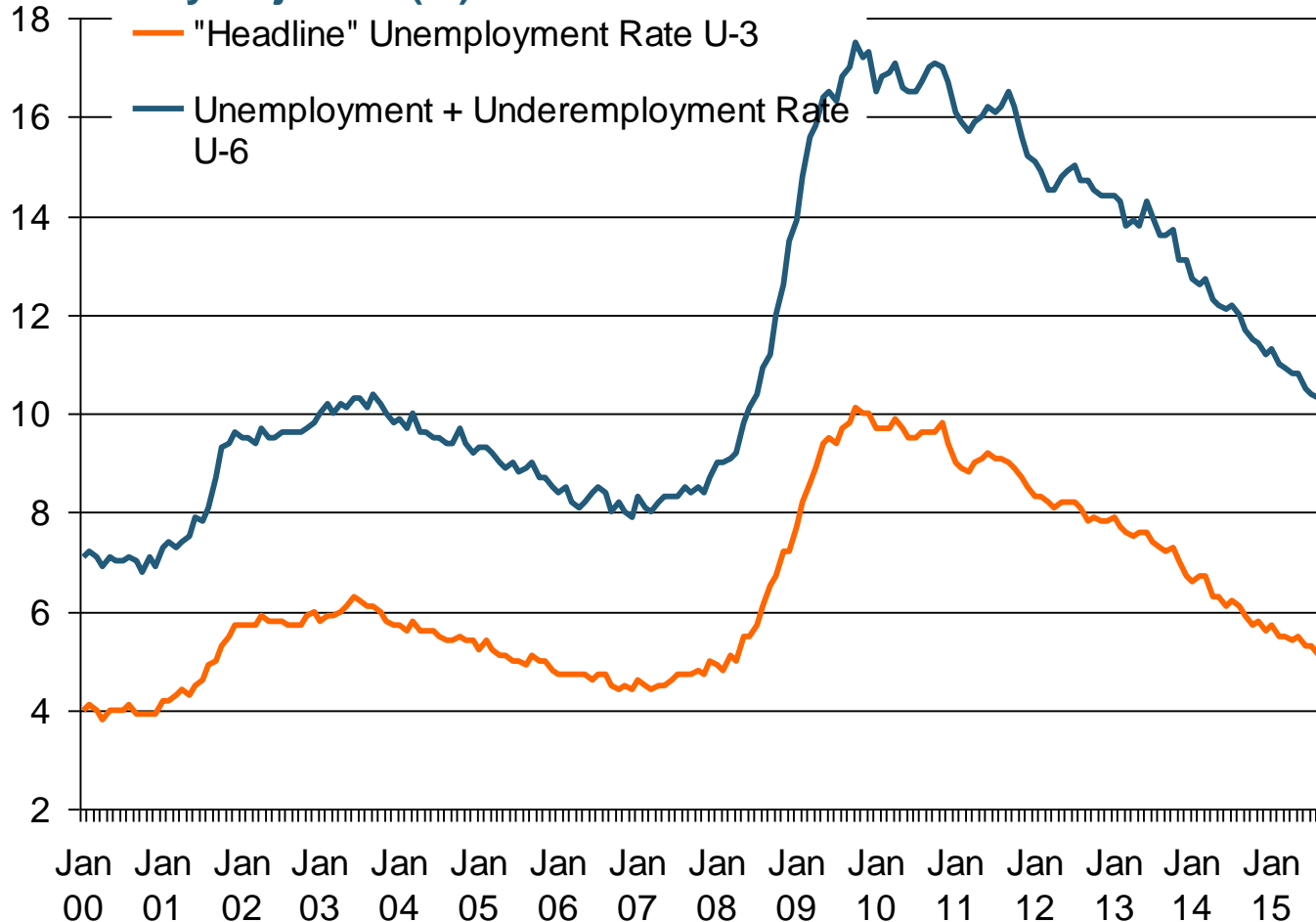
# **Labor Market Trends**

**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 (%)



U-6 soared from 8.0% in March 2007 to 17.5% in October 2009; Stood at 10.0% in Sept. 2015. 8% to 10% is “normal.”

“Headline” unemployment was 5.1% in Sep. 2015. 4.5% to 5.5% is “normal.”

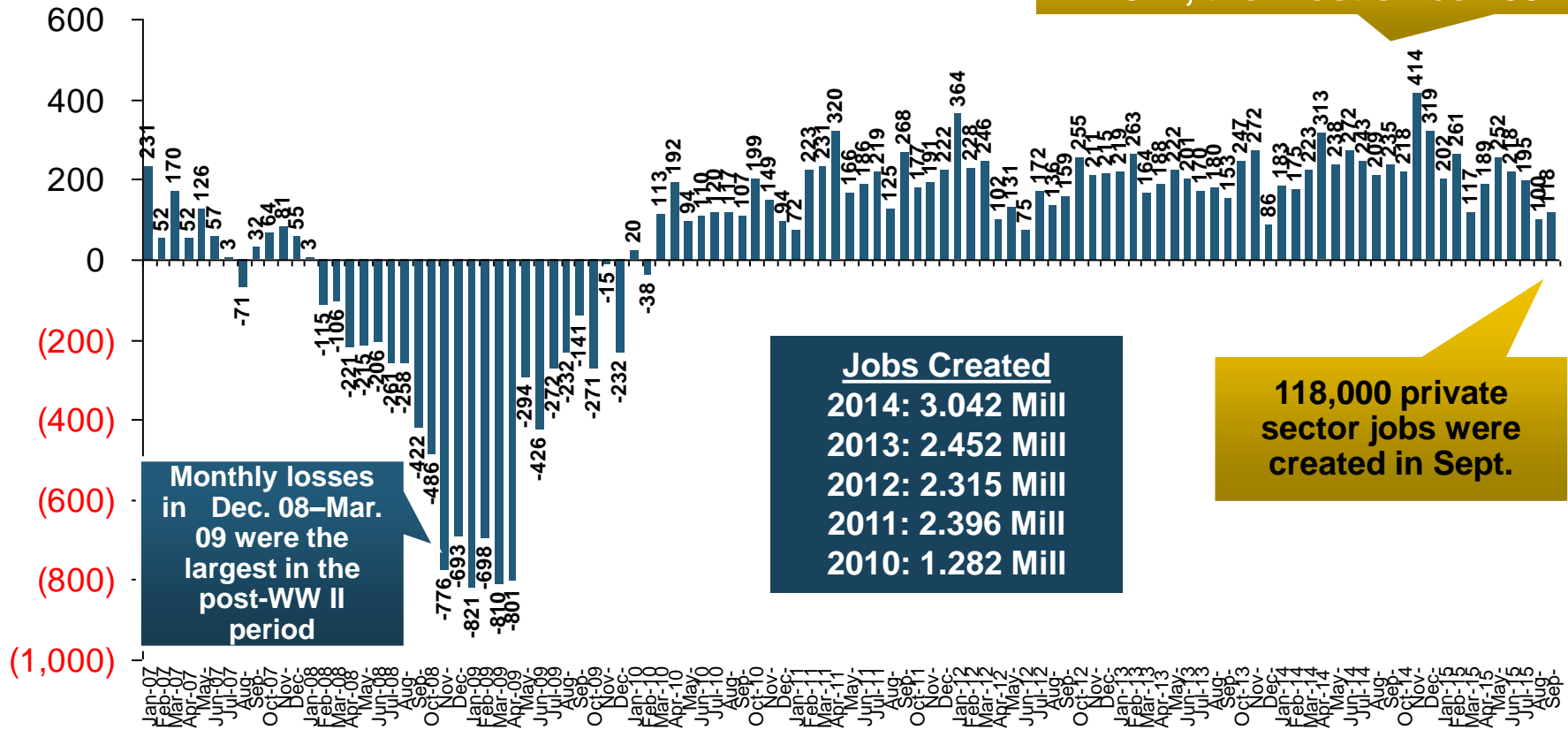
**Stubbornly high unemployment and underemployment constrain overall economic growth, but the job market is continuing to improve.**



# Monthly Change in Private Employment

January 2007 through Sept. 2015 (000s, Seasonally Adj.)

**3,042,000 jobs were created in 2014, the most since 1997**

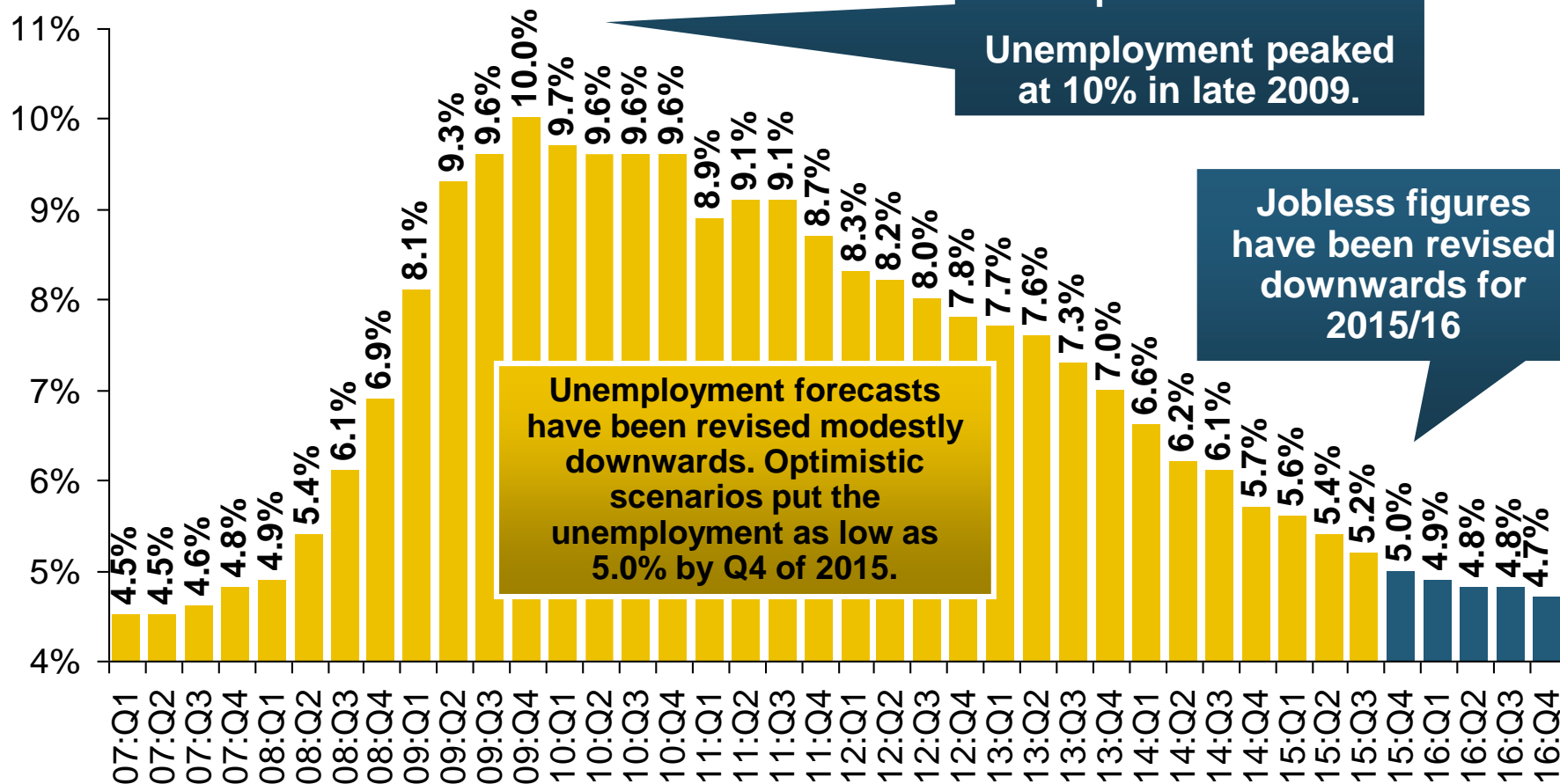


**Private Employers Added 13.03 Million Jobs Since Jan. 2010 After Having Shed 5.01 Million Jobs in 2009 and 3.76 Million in 2008 (State and Local Governments Have Shed Hundreds of Thousands of Jobs)**



# US Unemployment Rate Forecast

2007:Q1 to 2016:Q4F\*

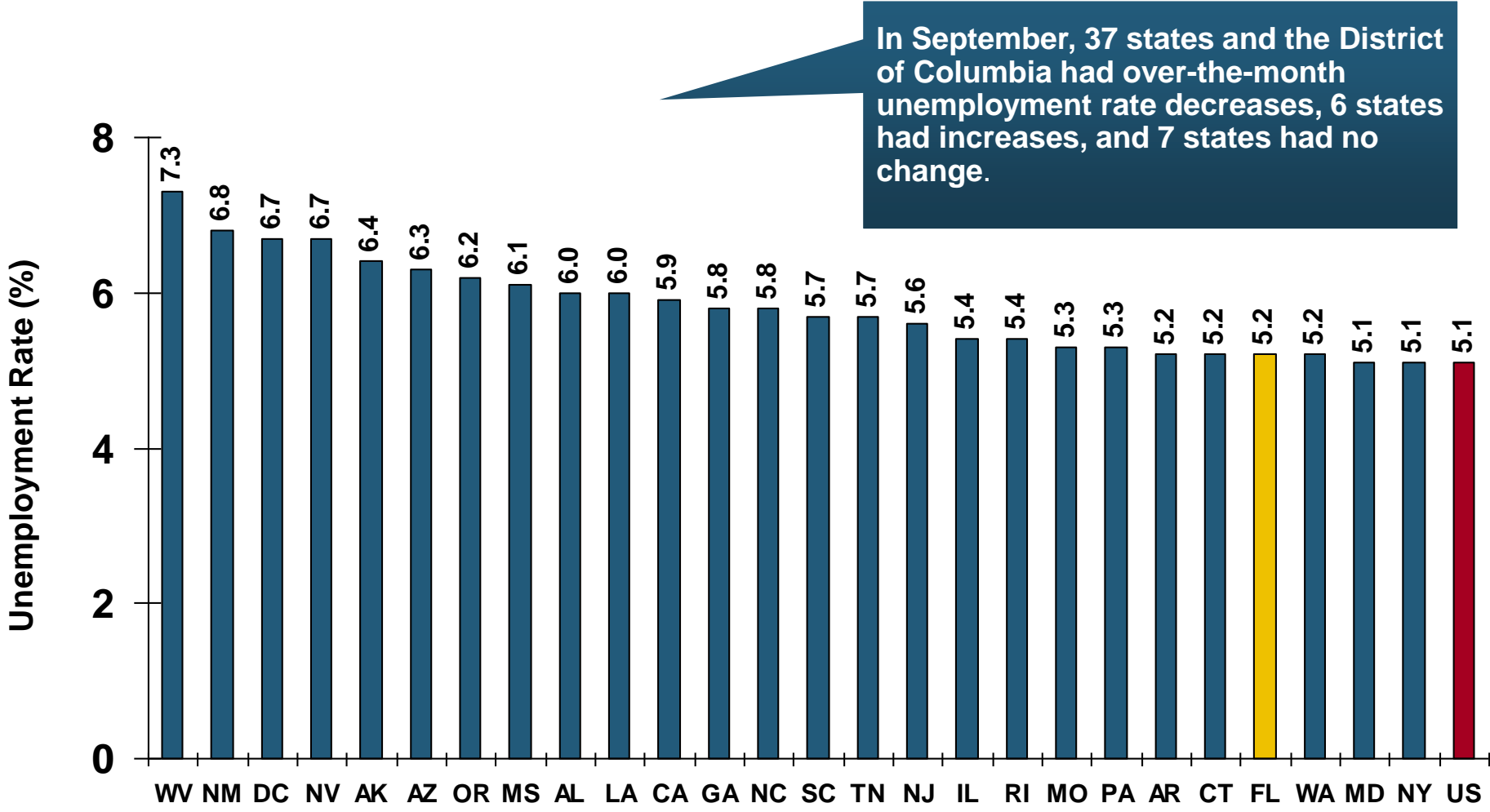


\* ■ = actual; ■ = forecasts

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (10/15 edition); Insurance Information Institute.



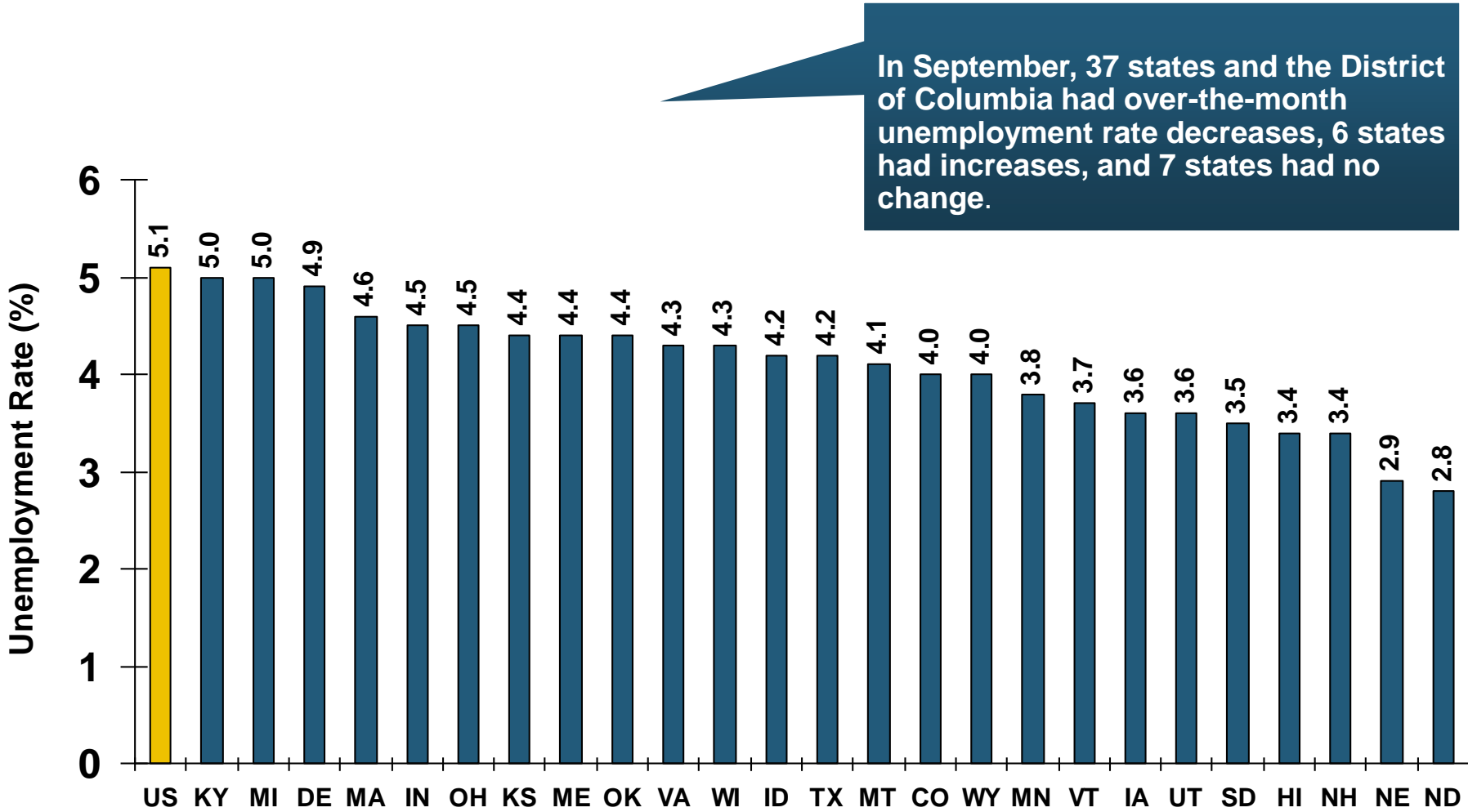
# Unemployment Rates by State, September 2015: Highest 25 States\*



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



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



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

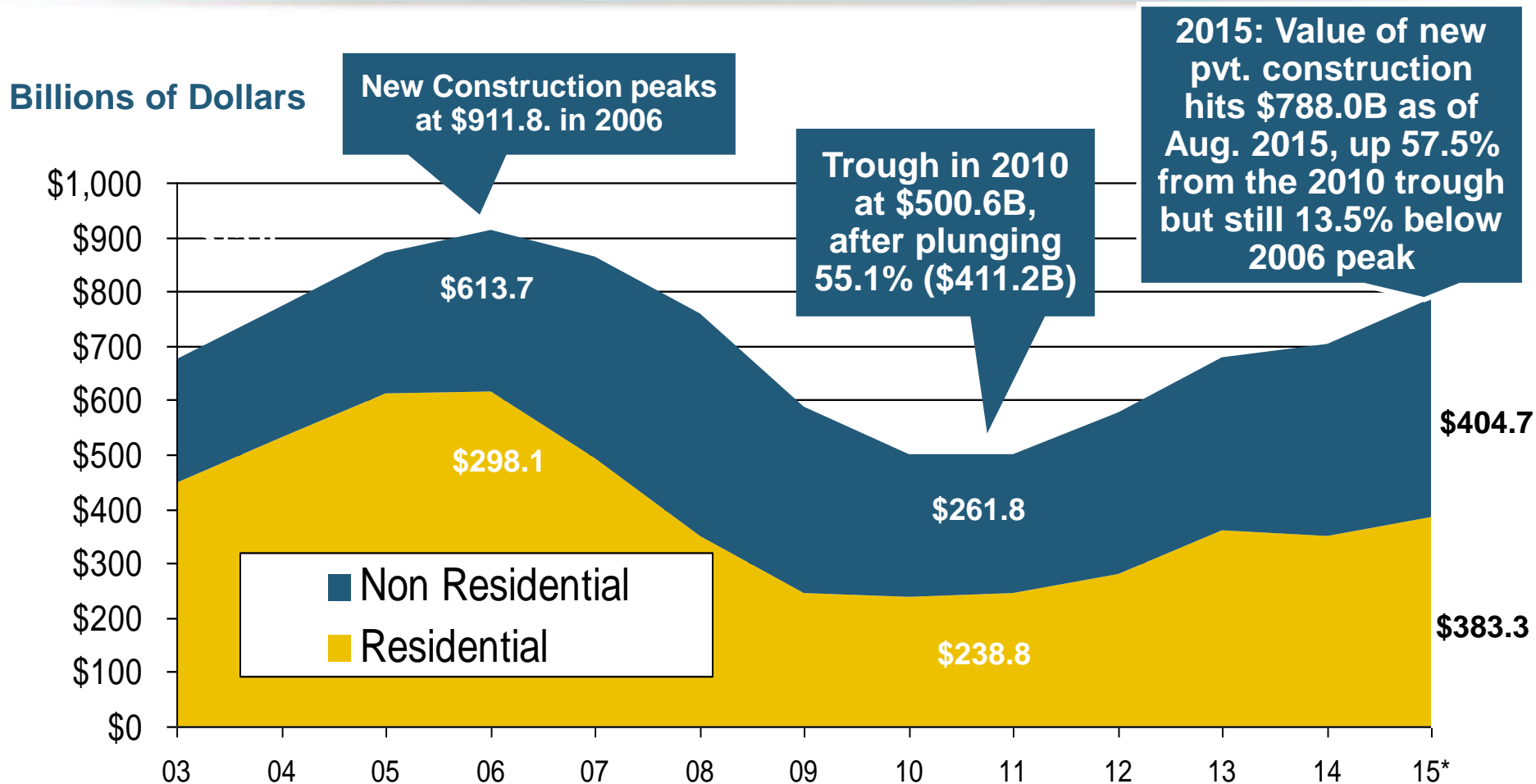


# **CONSTRUCTION INDUSTRY OVERVIEW & OUTLOOK**

**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 August.

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

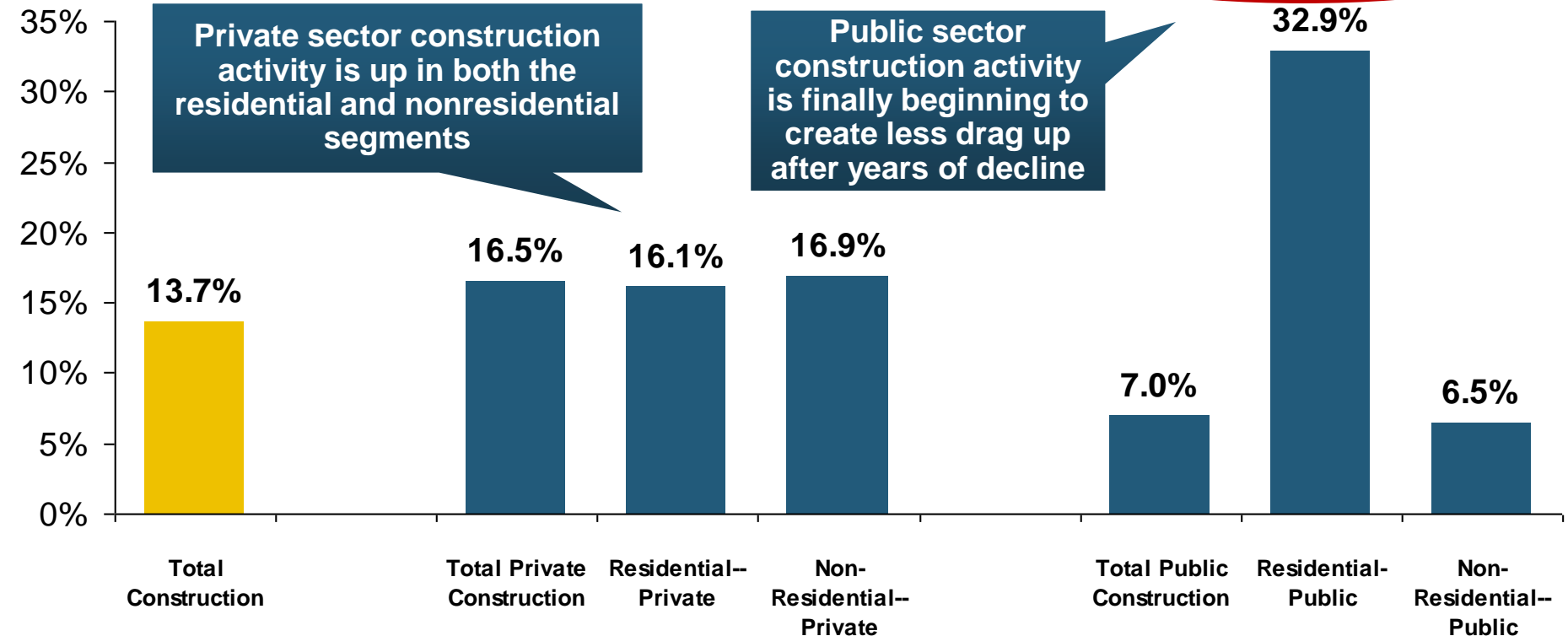


# Value of Construction Put in Place, August 2015 vs. August 2014\*

Growth (%)

**Private: +16.5%**

**Public: +7.0%**



**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

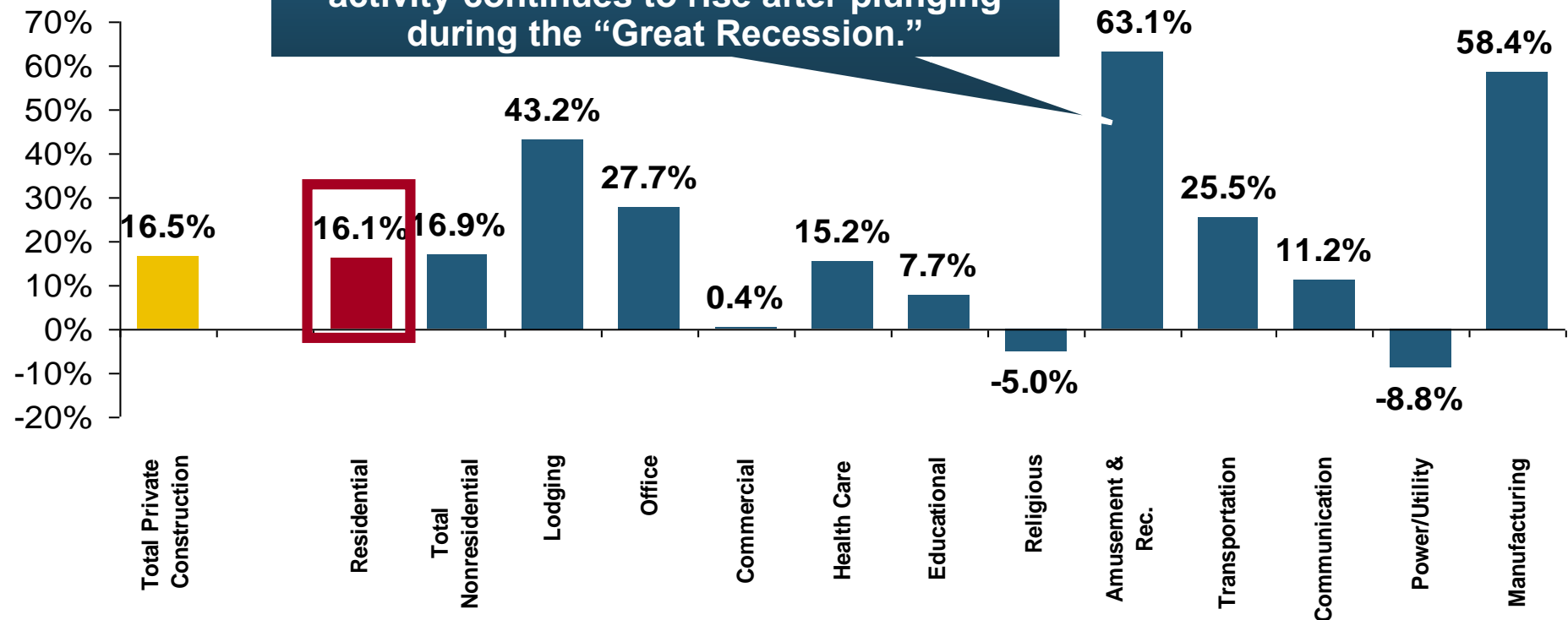
Source: U.S. Census Bureau, <http://www.census.gov/construction/c30/c30index.html> ; Insurance Information Institute.



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

Growth (%)

Led by the Manufacturing, Lodging, Office and Amusement & Recreations segments, Private nonresidential sector construction activity continues to rise after plunging during the "Great Recession."



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

\*seasonally adjusted

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

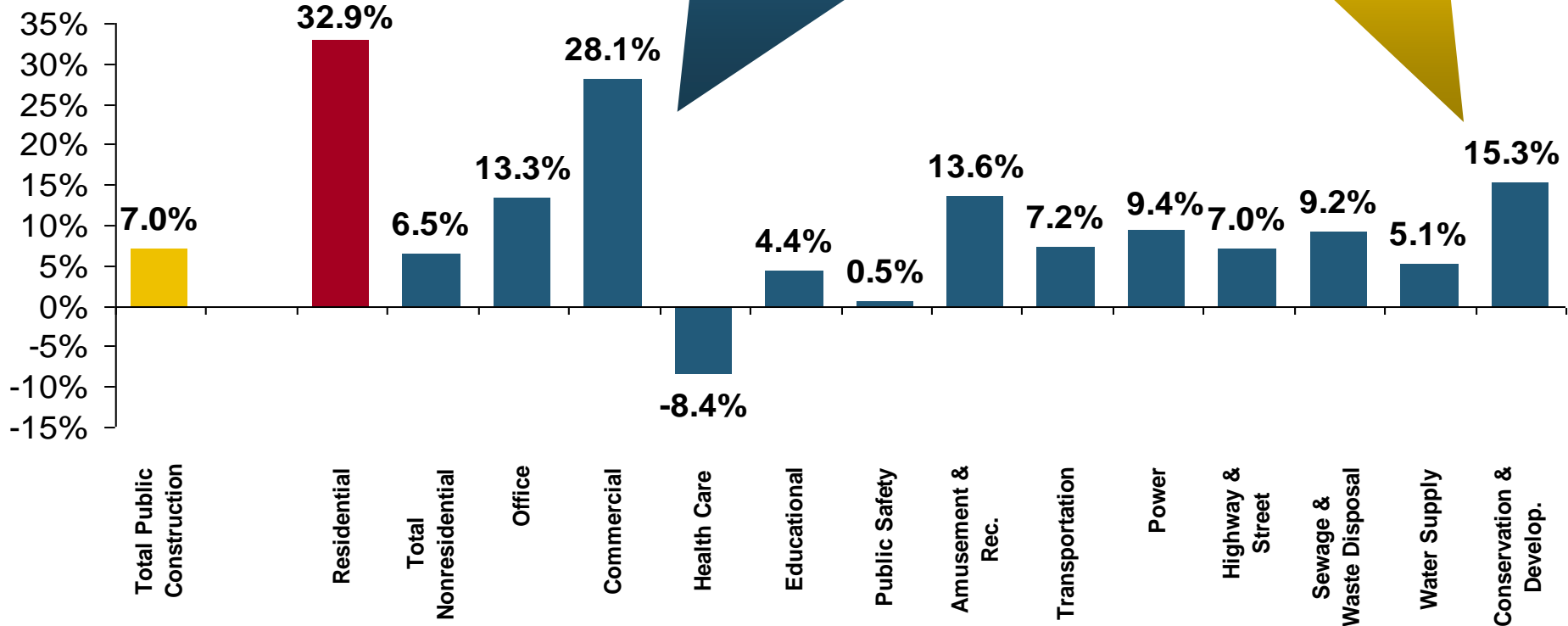


# Value of Public Construction Put in Place, by Segment, Aug. 2015 vs. Aug. 2014\*

Growth (%)

Public sector construction activity finally up in most segments after many months of decline, pushing up public entity risk exposures

Residential, Commercial and Conservation lead public sector construction



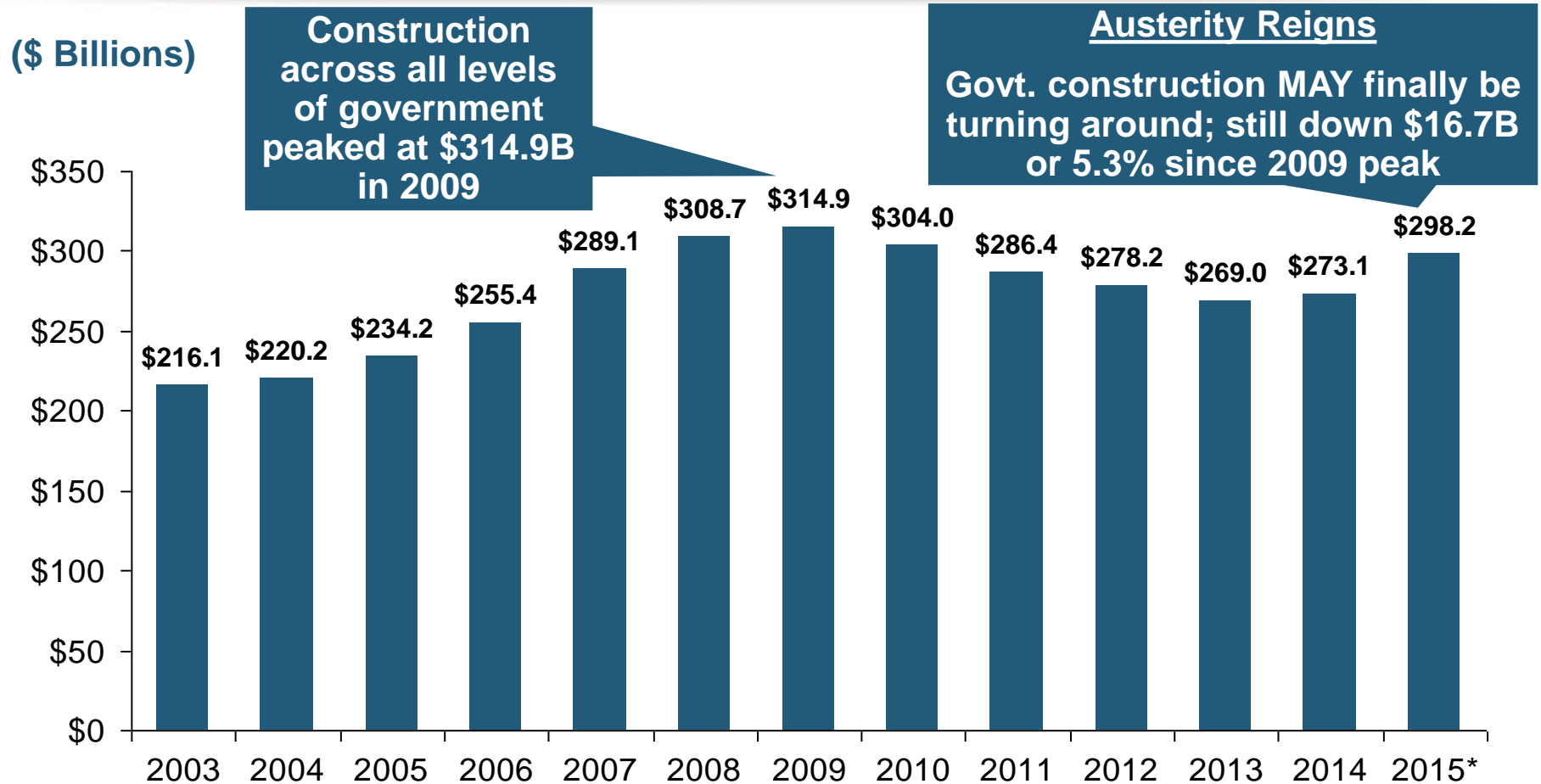
**Public Construction Activity is Beginning to Recover from its Long Contraction which Will Drive Demand in Many Commercial Insurance Lines**

\*seasonally adjusted

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



# 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**

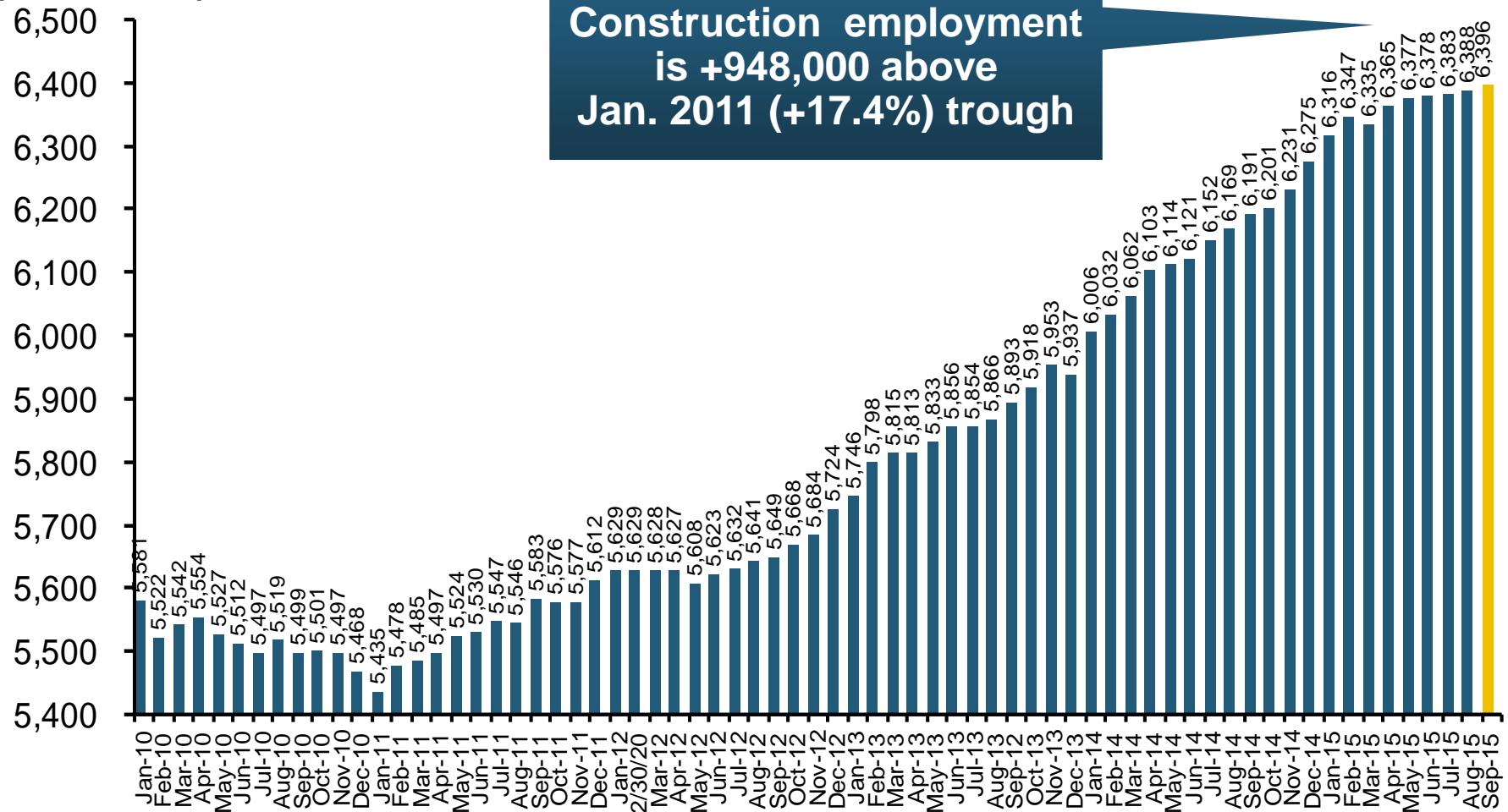
\*2015 figure is a seasonally adjusted annual rate as of June; [http://www.census.gov/construction/c30/historical\\_data.html](http://www.census.gov/construction/c30/historical_data.html)

Sources: US Department of Commerce; Insurance Information Institute.



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

(Thousands)



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

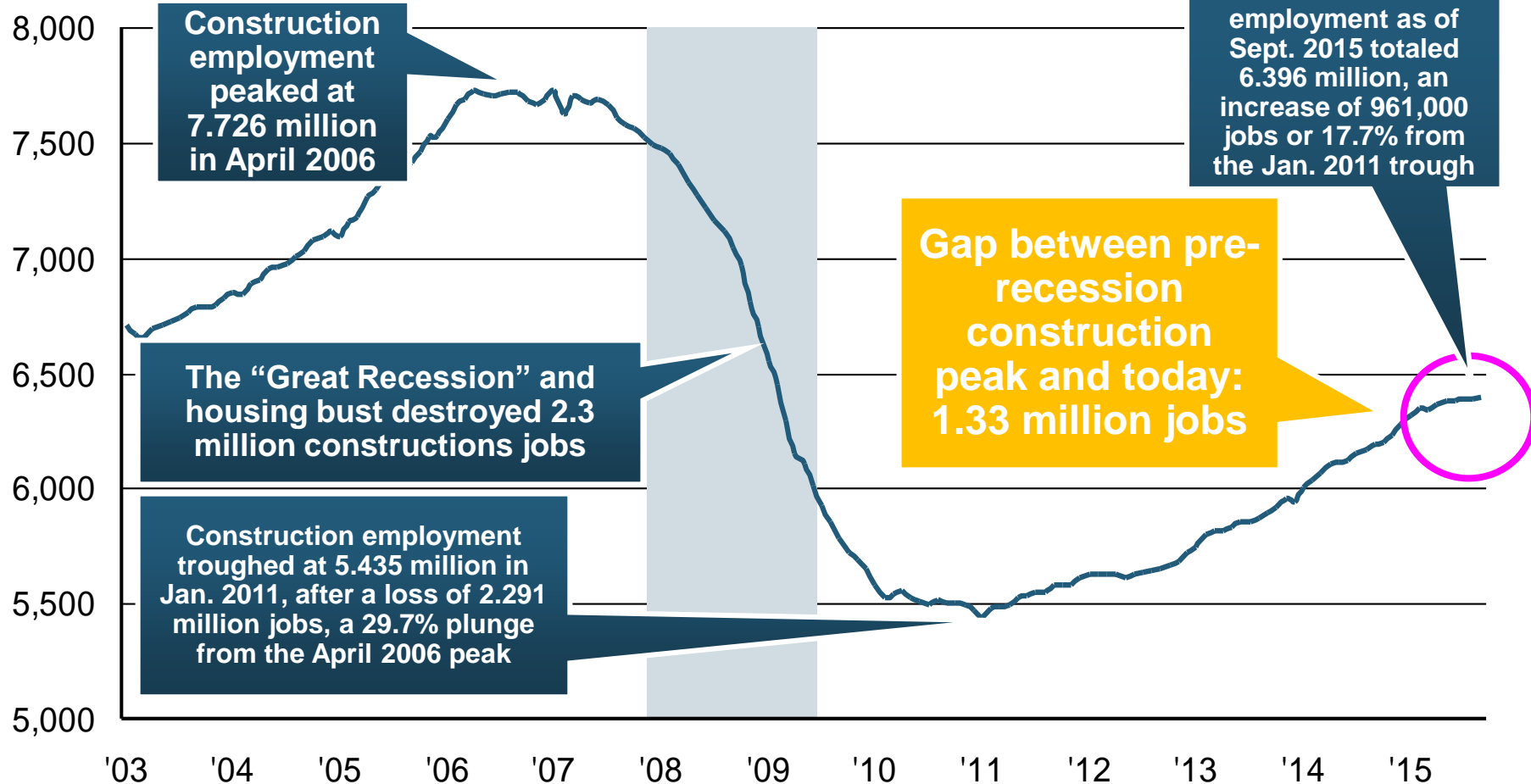
\*Seasonally adjusted.

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



# Construction Employment, Jan. 2003–Sept. 2015

(Thousands)



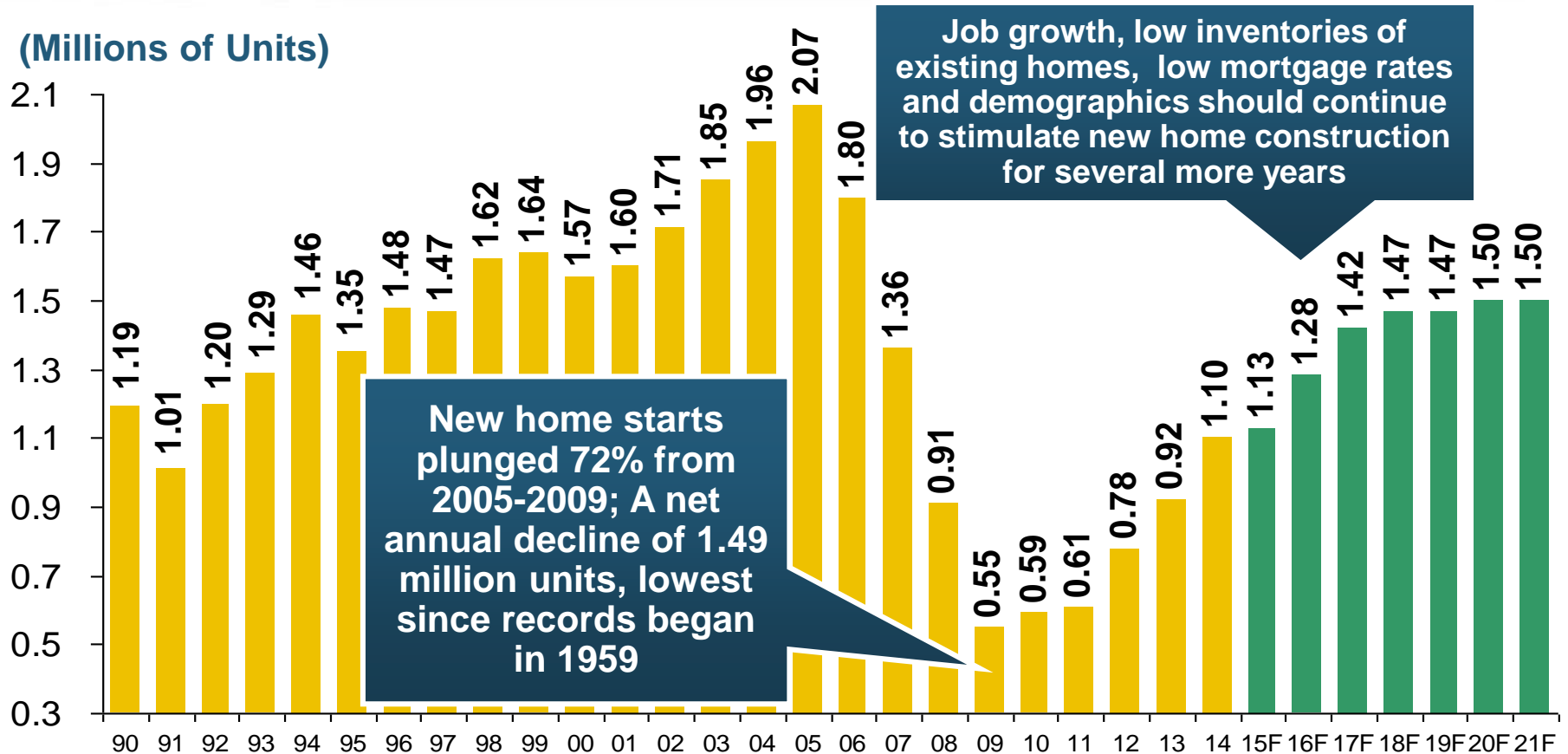
**The Construction Sector Was a Growth Leader in 2014-15 as the Housing Market, Private Investment and Govt. Spending Recover. WC Insurers Will Benefit.**

Note: Recession indicated by gray shaded column.

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



# New Private Housing Starts, 1990-2021F

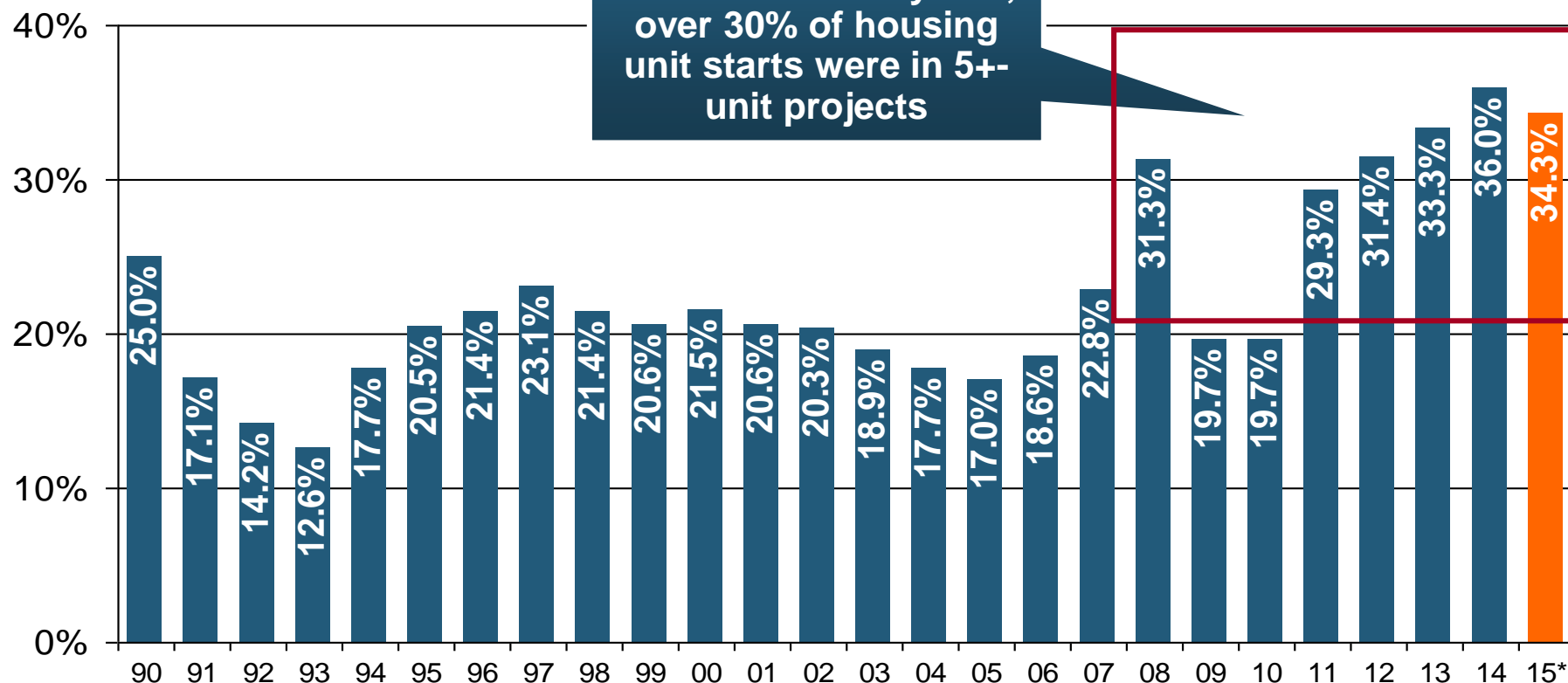


**Insurers Are Continue to See Meaningful Exposure Growth in the Wake of the “Great Recession” Associated with Home Construction: Construction Risk Exposure, Surety, Commercial Auto; Potent Driver of Workers Comp Exposure**



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

Units in Multiple-Unit Projects  
as Percent of Total

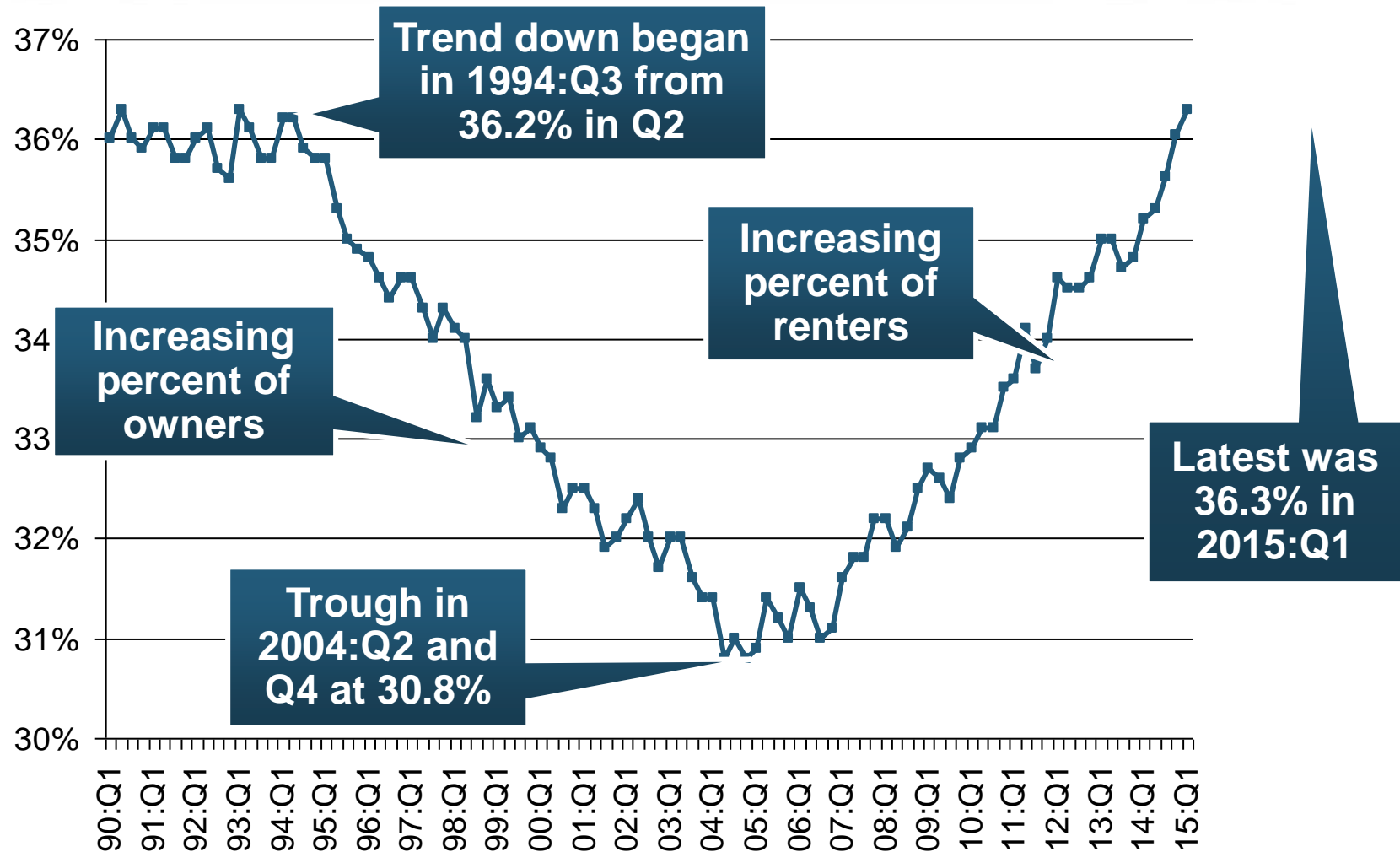


**For the U.S. as a whole, the trend toward multi-unit housing projects (vs. single-unit homes) is recent. Commercial insurers with Workers Comp, Construction risk exposure, and Surety benefit.**

\*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%).**

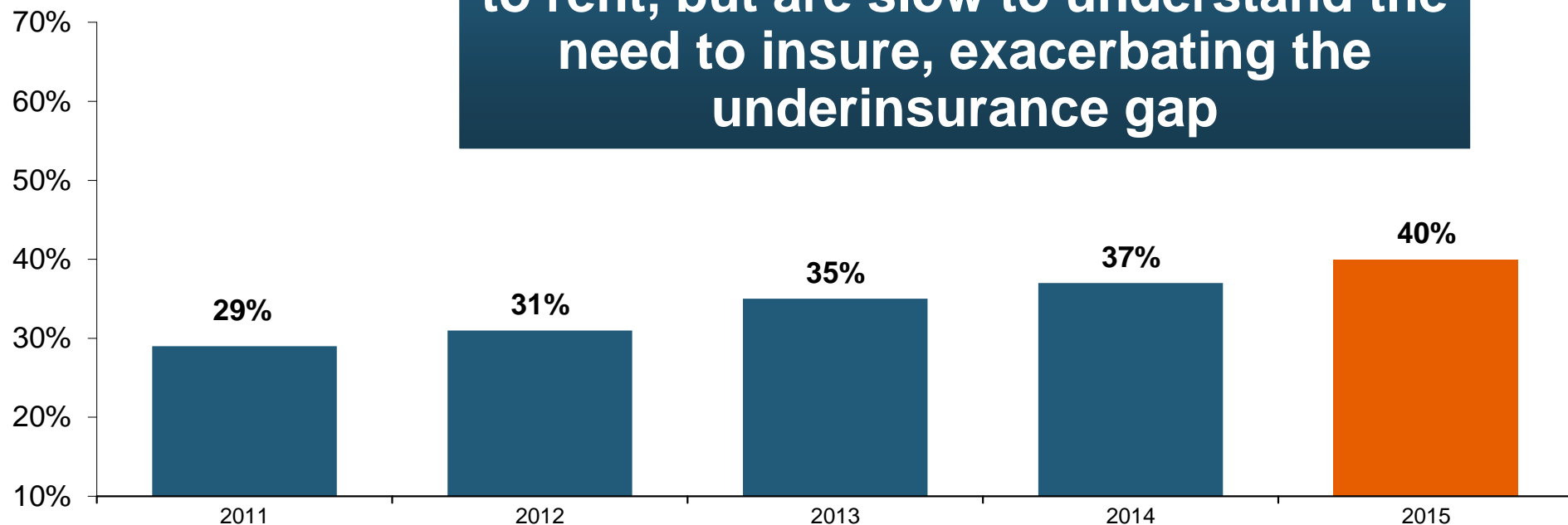
Sources: US Census Bureau, *Residential Vacancies & Home Ownership in the First Quarter of 2015* (released April 28, 2015) and earlier issues; Insurance Information Institute. Next Census Bureau report to be released on July 28, 2015.



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

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

**Americans are increasingly choosing to rent, but are slow to understand the need to insure, exacerbating the underinsurance gap**



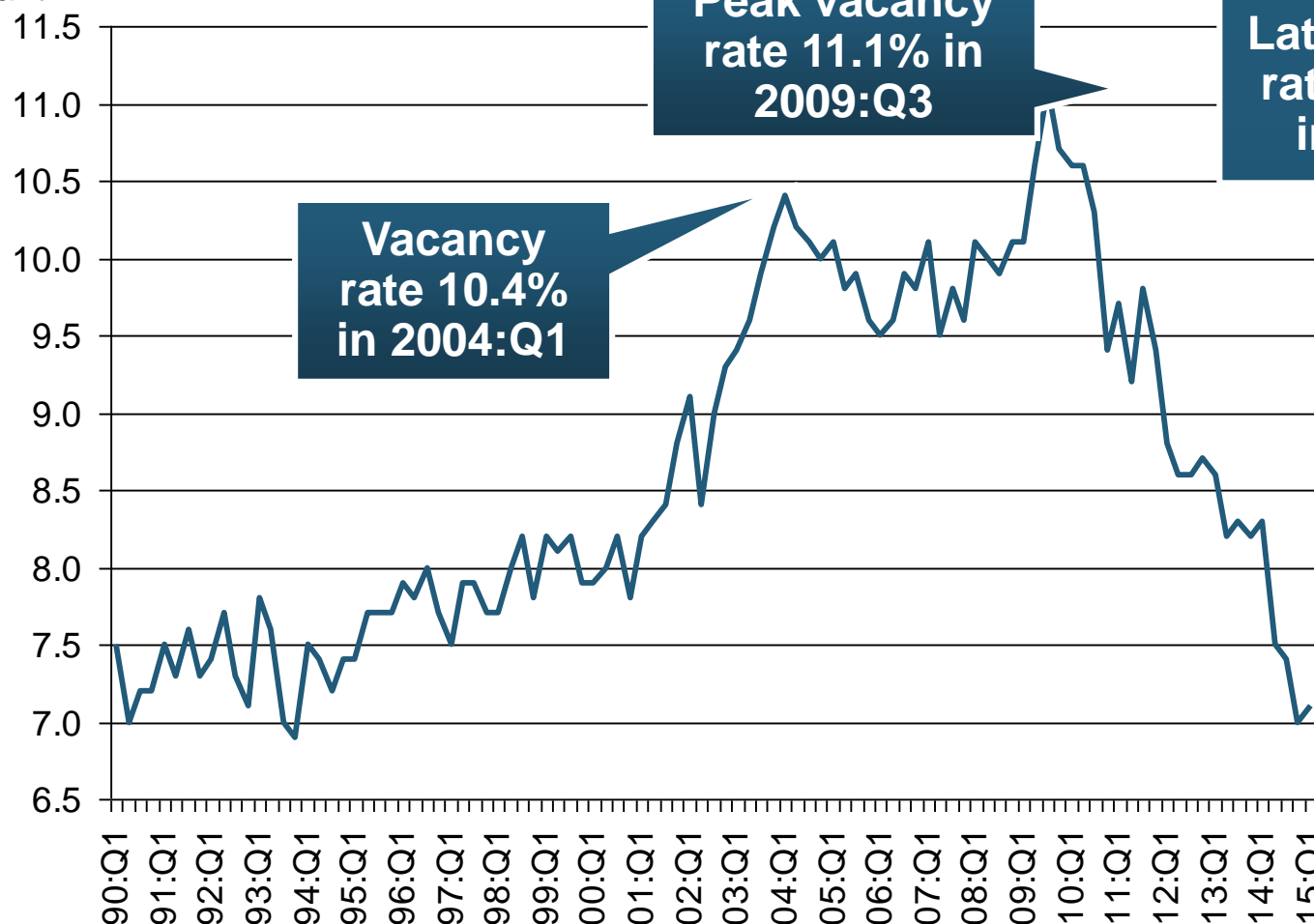
**The Percentage of Renters Who Have Renters Insurance Has Been Rising Since 2011.**

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



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

Percent vacant



**Before the 2001 recession, rental vacancy rates were 8% or less. We're below those levels now. => More multi-unit construction?**

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.



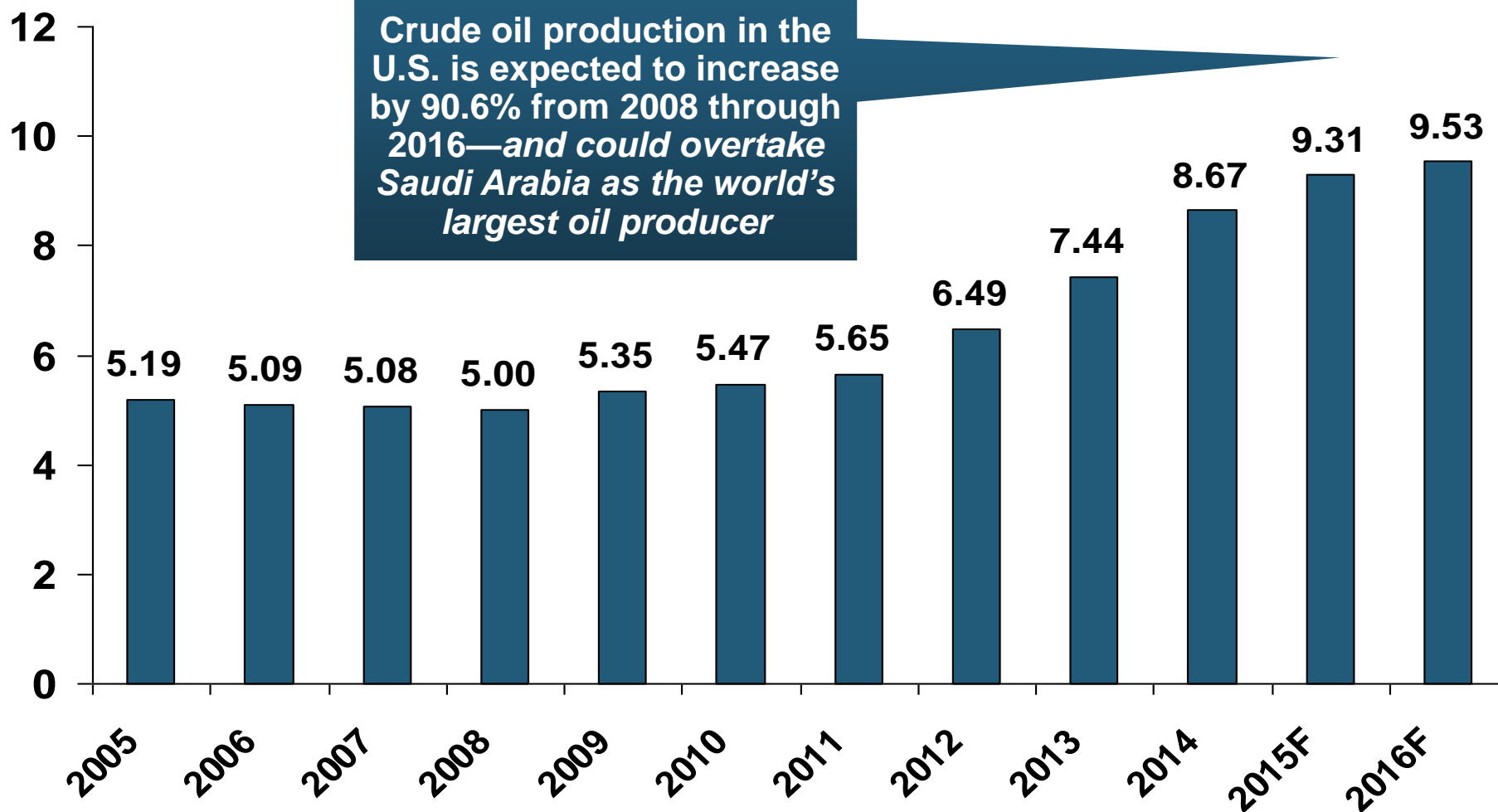
# **ENERGY SECTOR: OIL & GAS INDUSTRY FUTURE IS BRIGHT BUT VOLATILE**

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



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

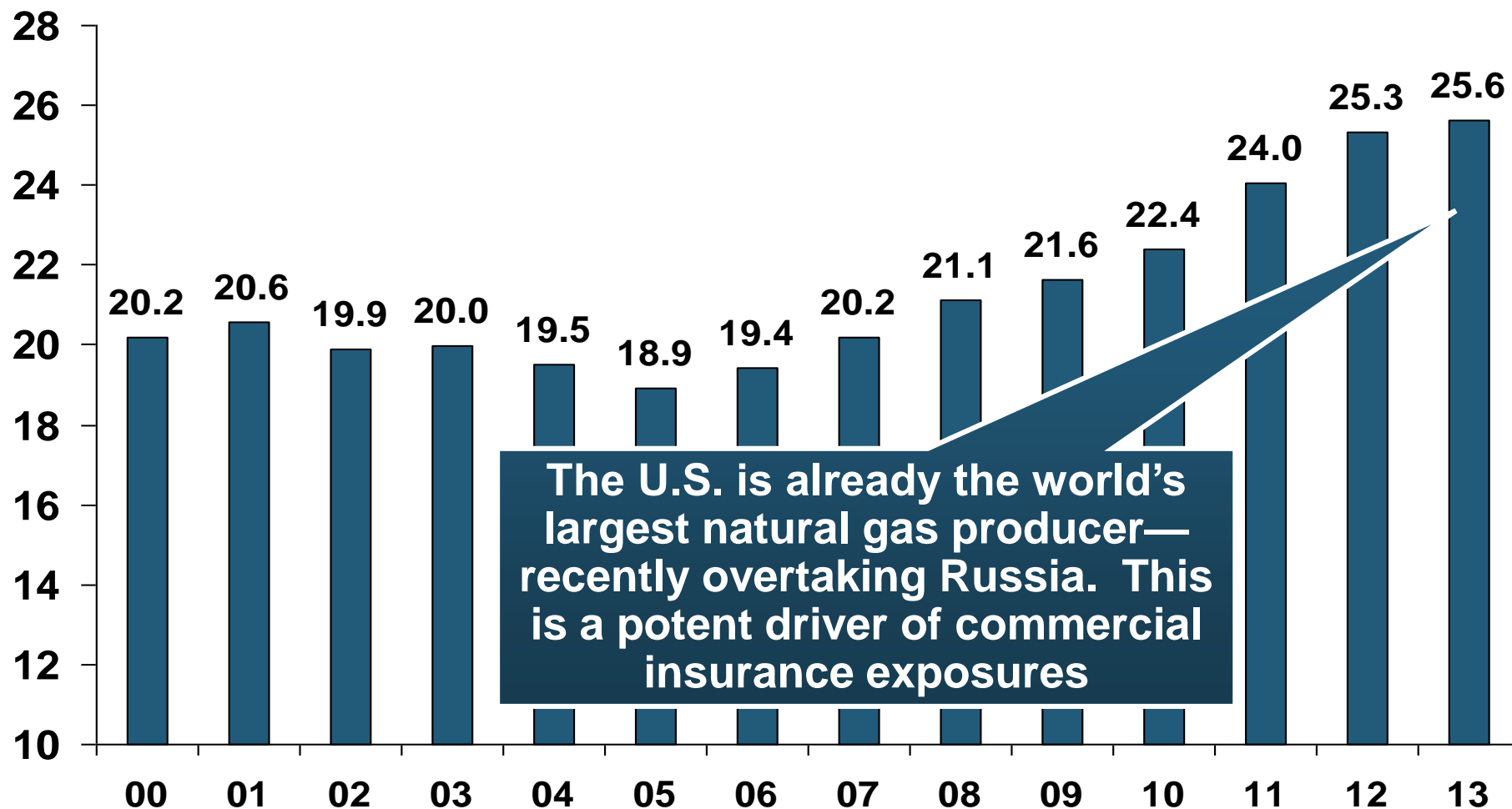
Millions of Barrels per Day





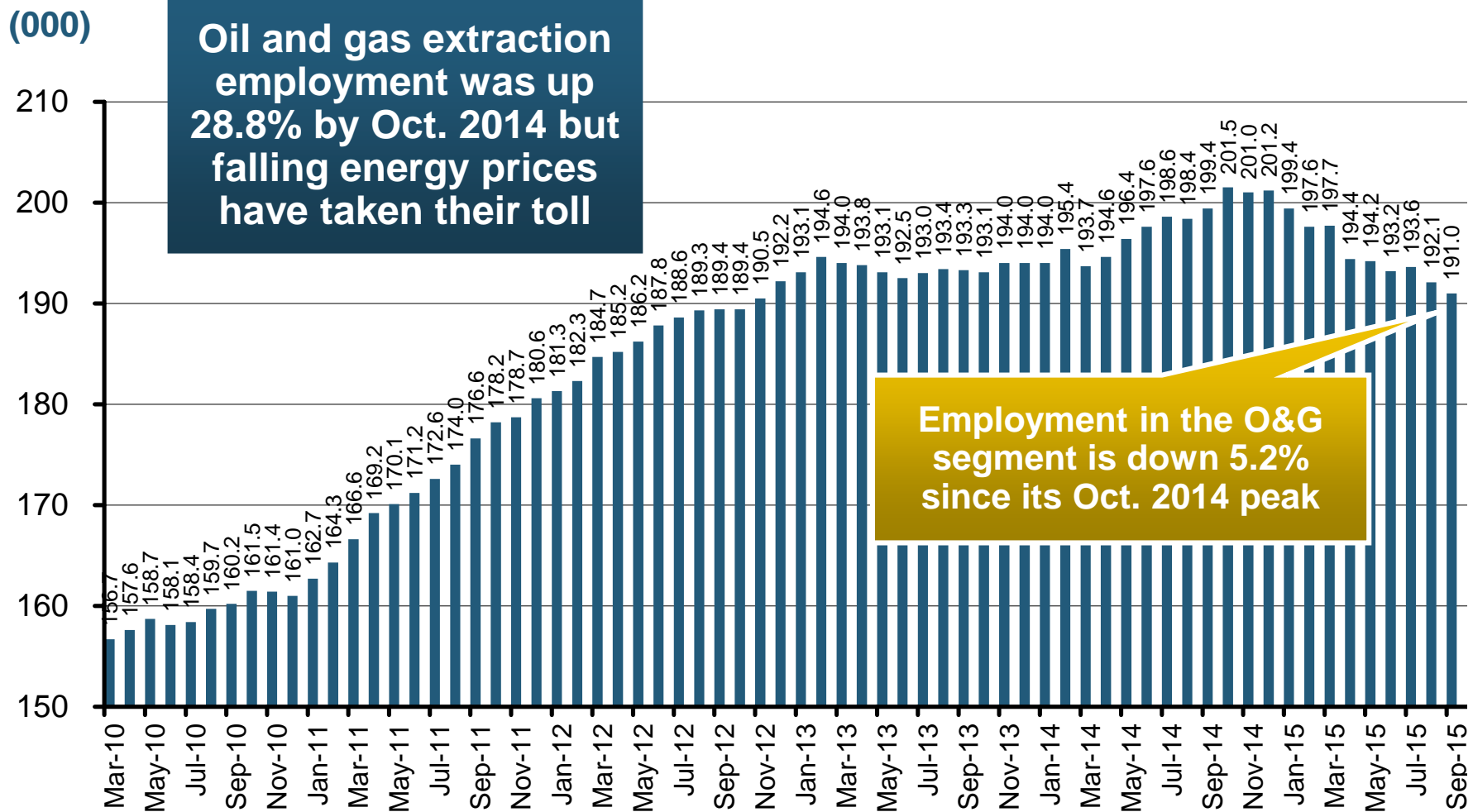
# U.S. Natural Gas Production, 2000-2013

Trillions of Cubic Ft. per Year





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



\*Seasonally adjusted

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



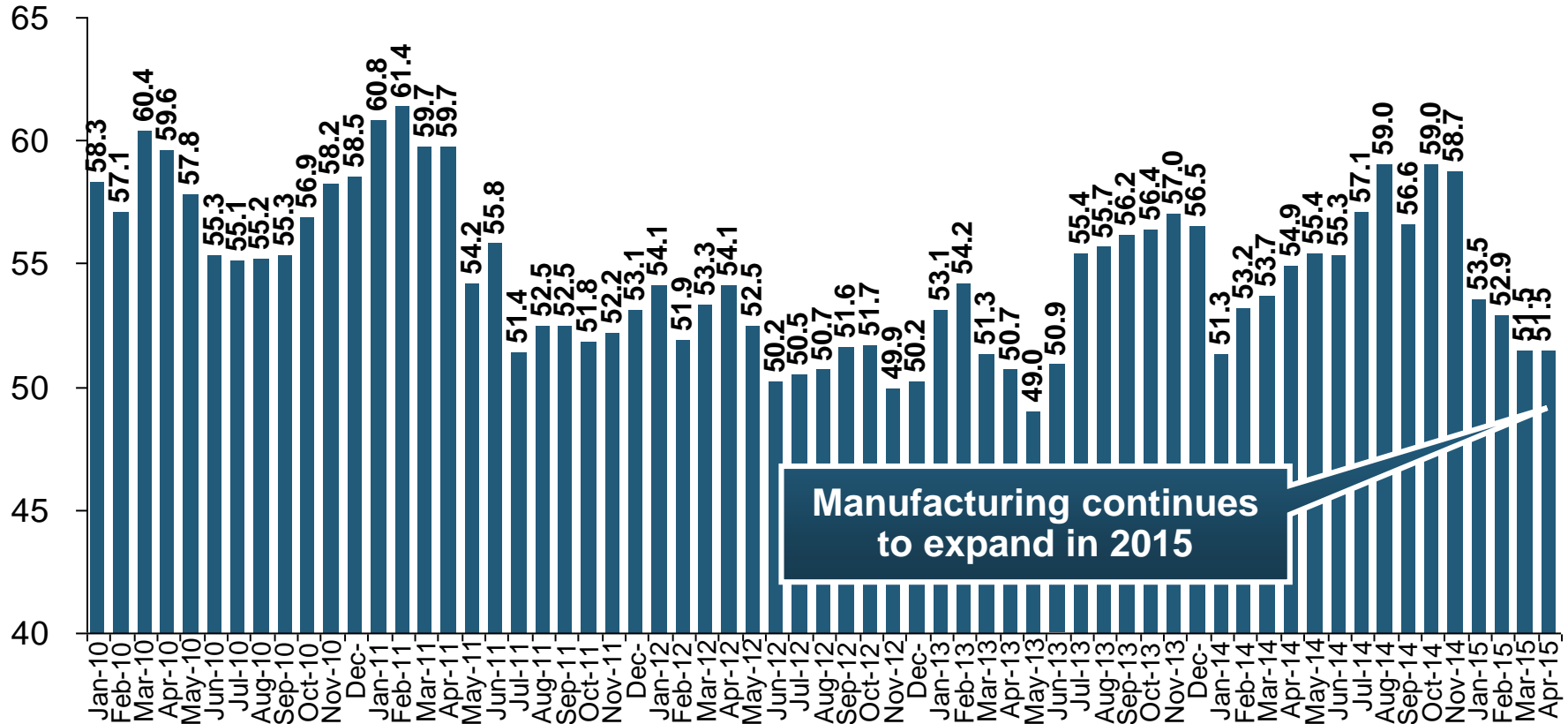
# **MANUFACTURING SECTOR OVERVIEW & OUTLOOK**

**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)

January 2010 through April 2015



**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.**

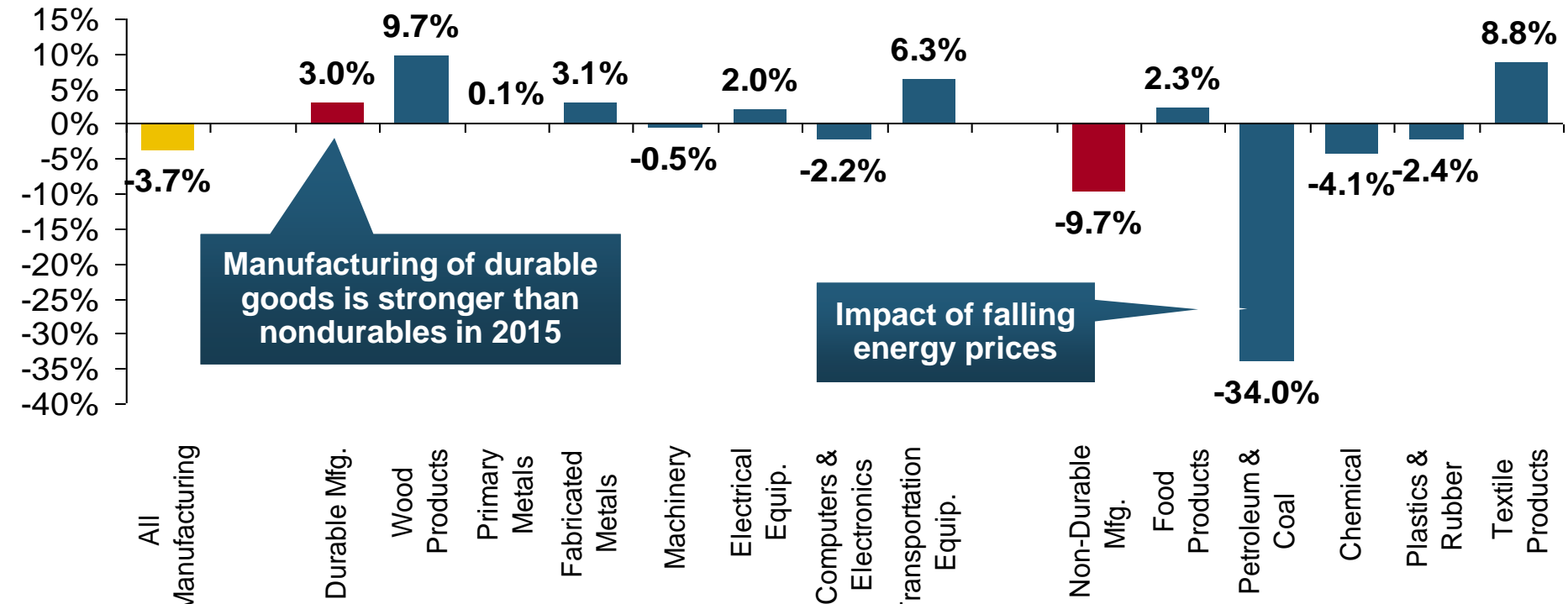


# Manufacturing Growth for Selected Sectors, 2015 vs. 2014\*

Growth (%)

**Durables: +3.0%**

**Non-Durables: -9.7%**



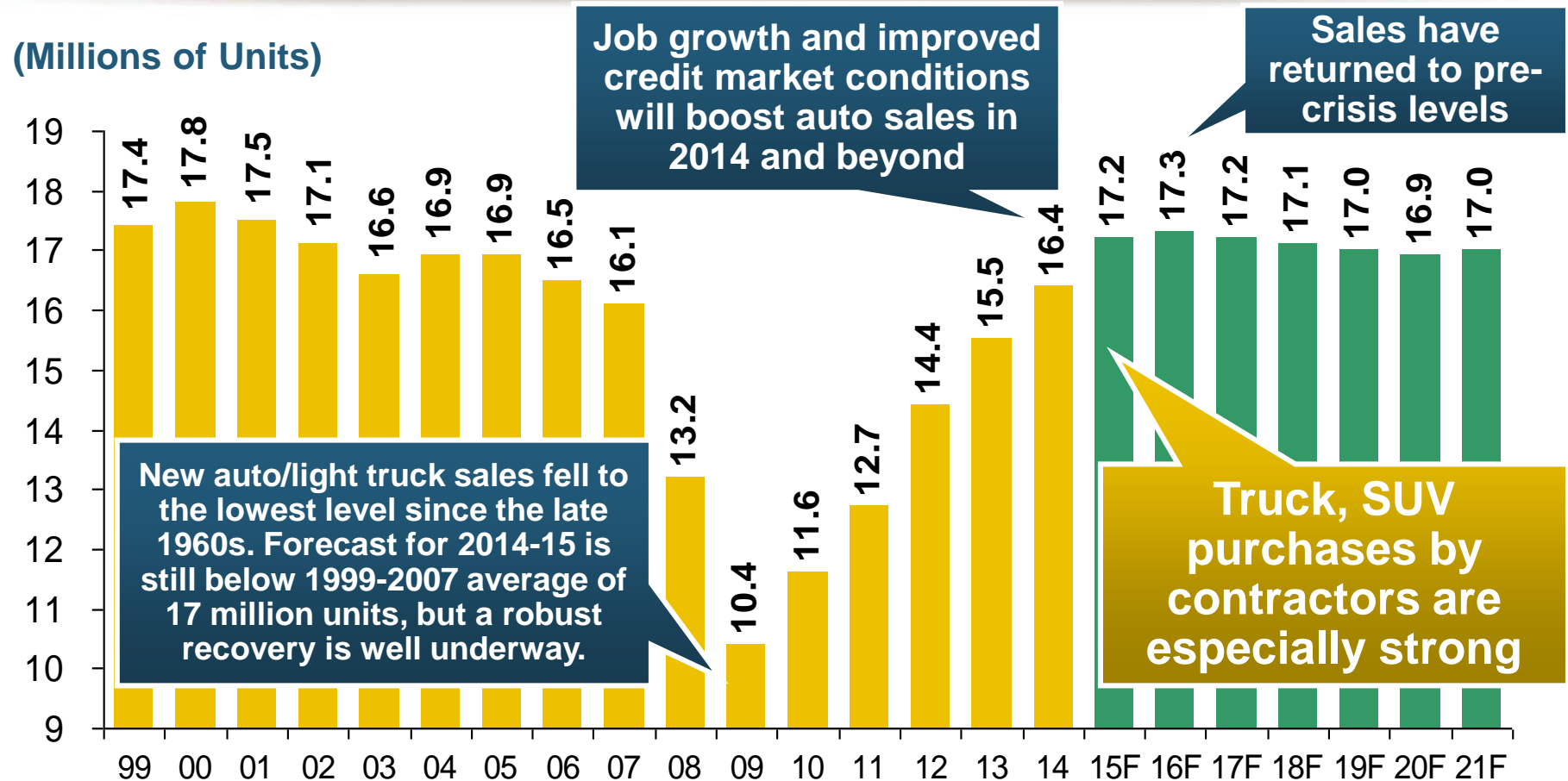
**Manufacturing Is Expanding in Many Sectors But Declining Energy Prices Are Dragging Down Industry Figures. Continued Growth Across a Number of Sectors that Will Contribute to Growth in Insurable Exposures Including: WC, Commercial Property, Commercial Auto and Many Liability Coverages**

\*Seasonally adjusted; Data 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/>



# Auto/Light Truck Sales, 1999-2021F

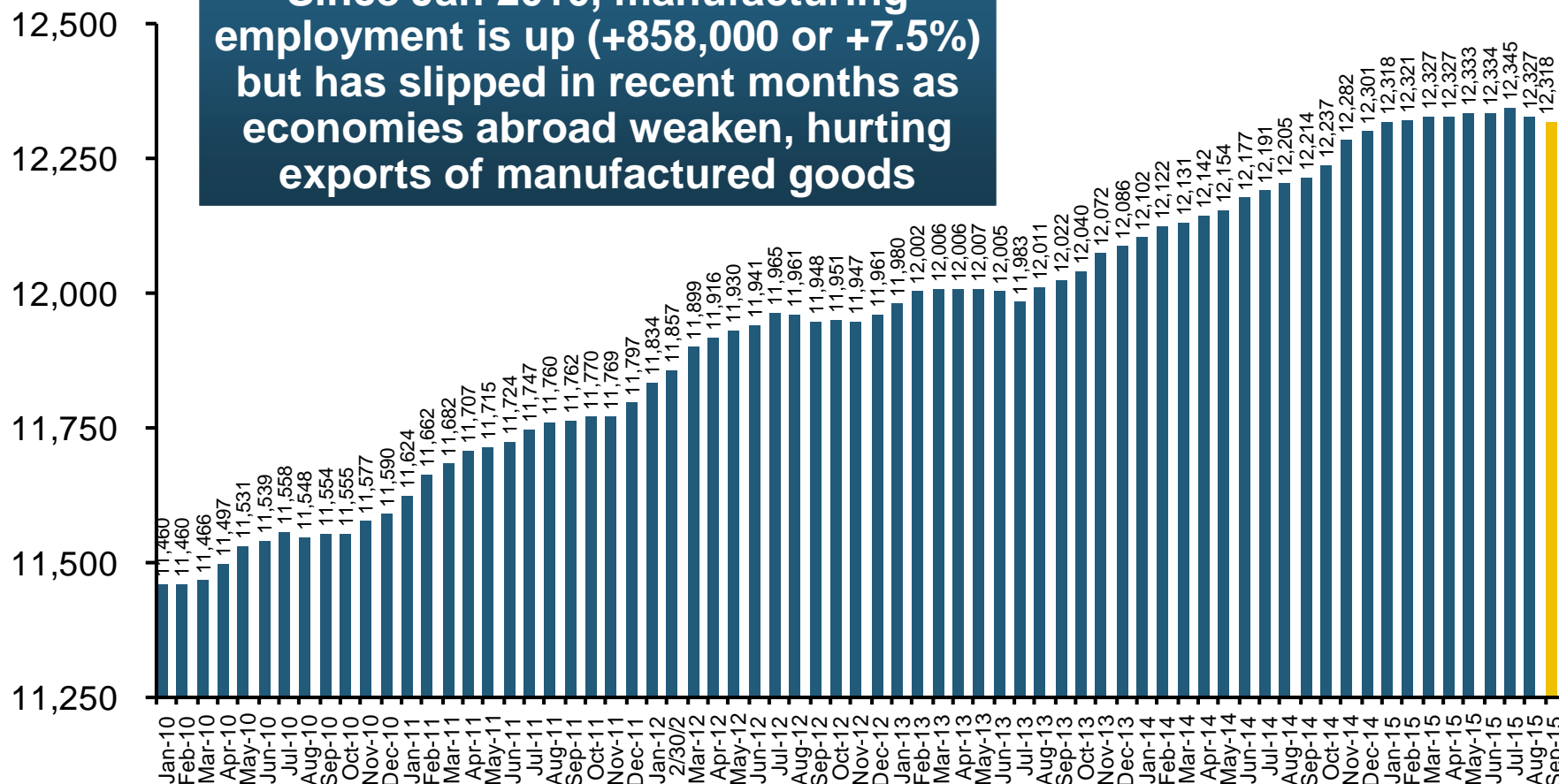


**Yearly car/light truck sales will likely continue at current levels, in part replacing cars that were held onto in 2008-12. New vehicles will generate more physical damage insurance coverage but will be more expensive to repair. PP Auto premium might grow by 5% - 6%.**



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

(Thousands)



**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

\$ Millions

\$500,000

\$400,000

\$300,000

\$200,000

The value of Manufacturing Shipments in March 2015 was \$482.2B—down 5.1% since the July 2014 record high of \$508.1B

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

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.

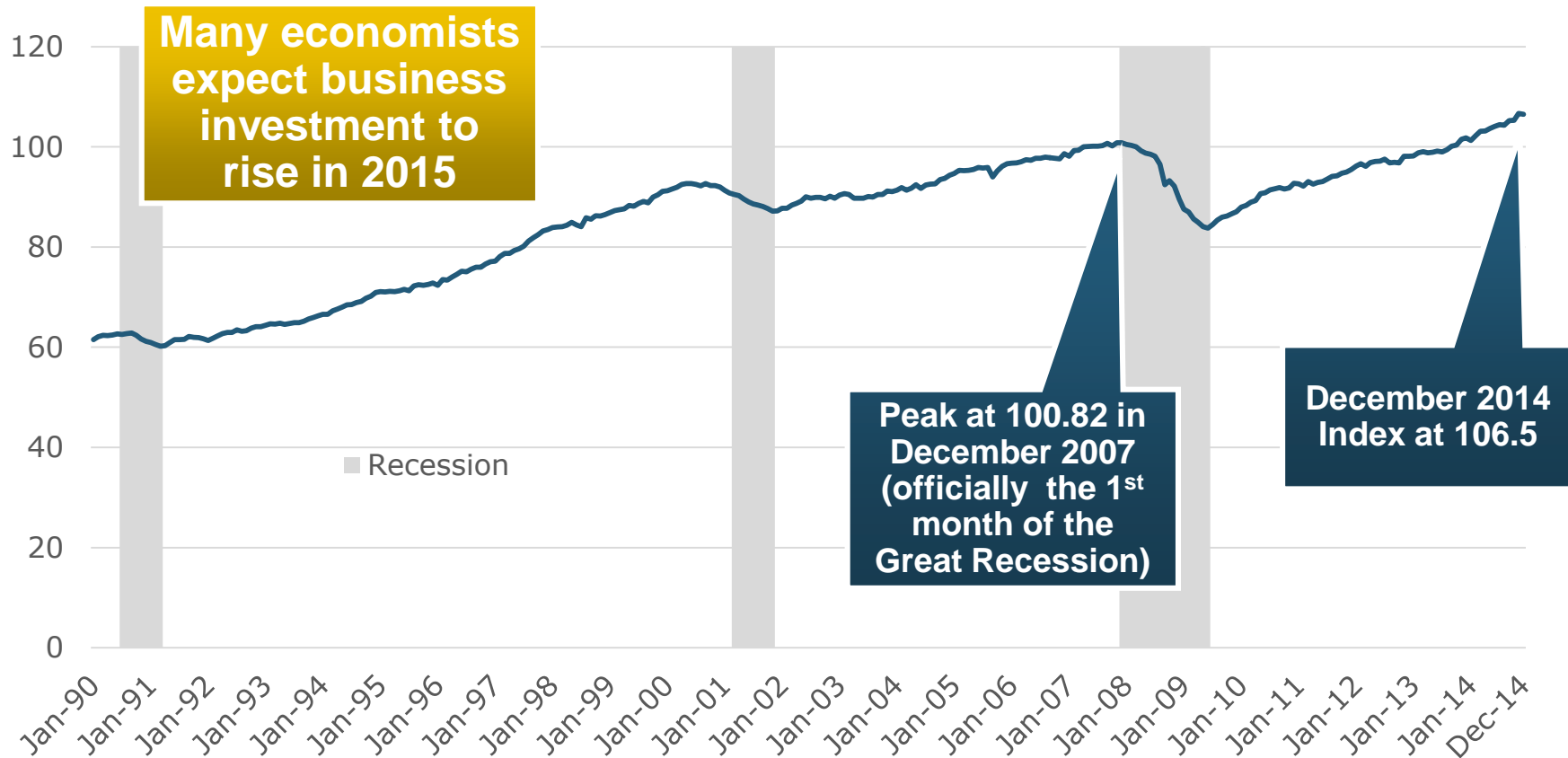
\* Seasonally adjusted; Data published May 4, 2015.

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



# 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

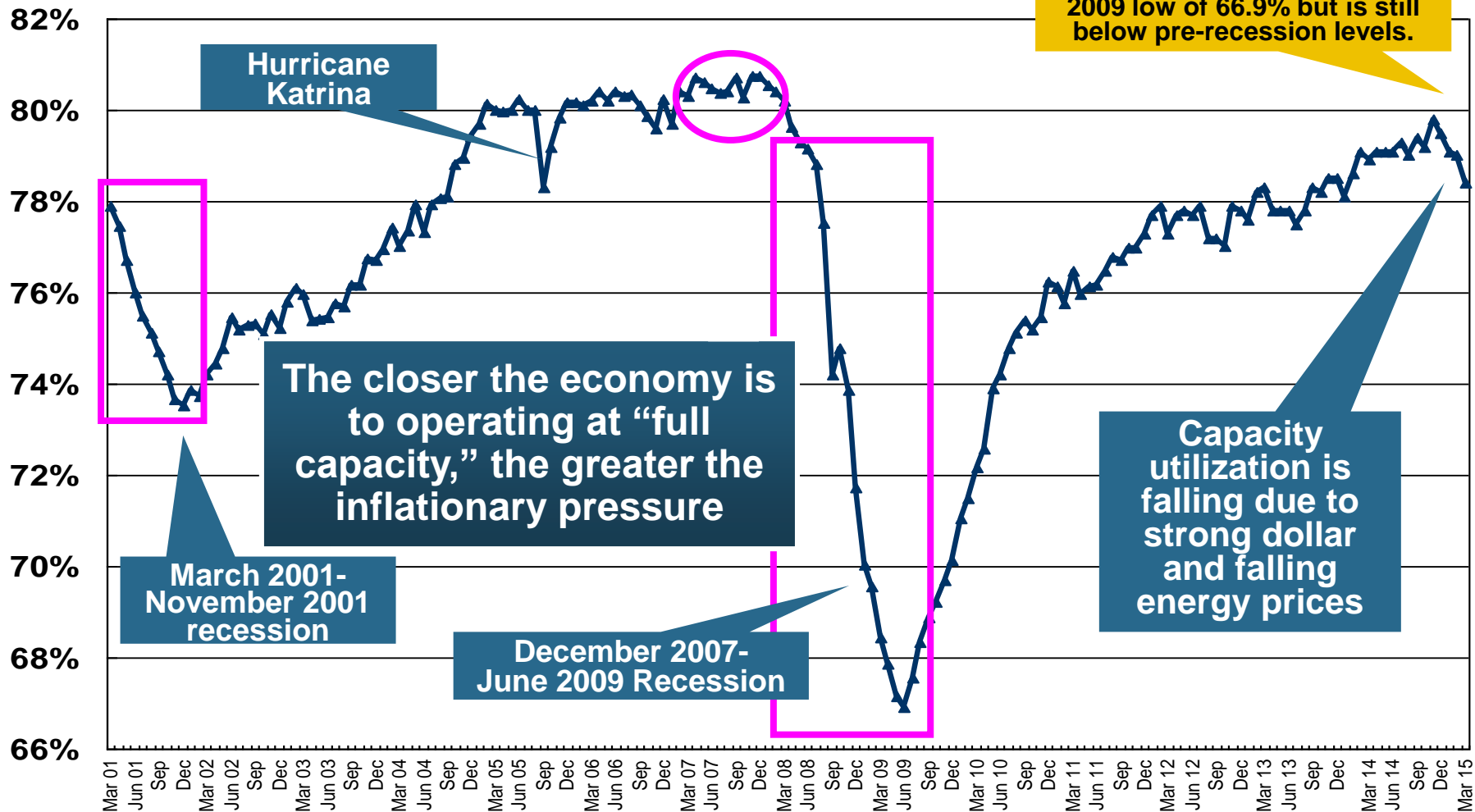
Sources: Federal Reserve Board at [http://www.federalreserve.gov/releases/g17/ipdisk/ip\\_sa.txt](http://www.federalreserve.gov/releases/g17/ipdisk/ip_sa.txt).  
National Bureau of Economic Research (recession dates); Insurance Information Institute.



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

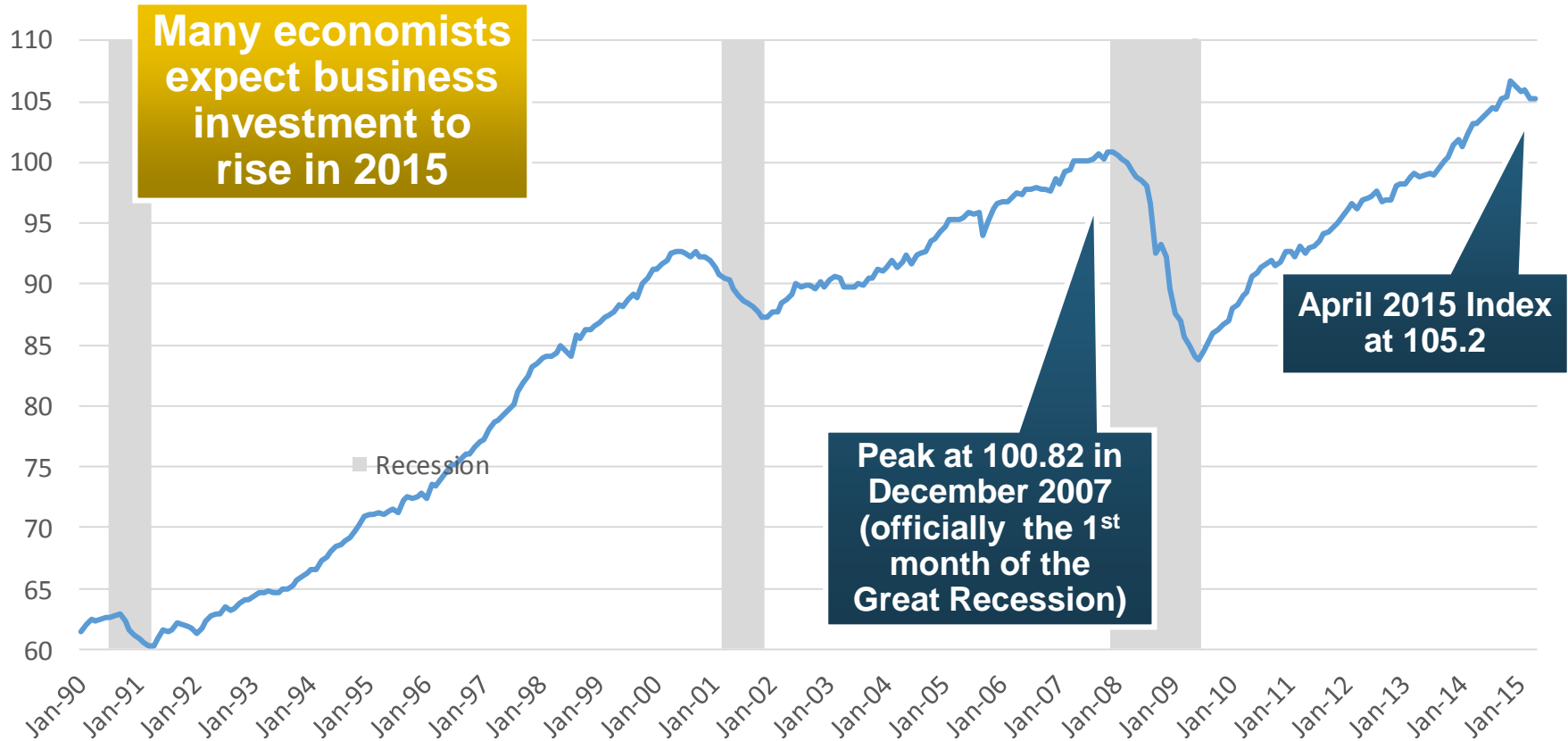
March 2001 through March 2015

Percent of Industrial Capacity





# 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 [http://www.federalreserve.gov/releases/g17/ipdisk/ip\\_sa.txt](http://www.federalreserve.gov/releases/g17/ipdisk/ip_sa.txt).  
National Bureau of Economic Research (recession dates); Insurance Information Institute.



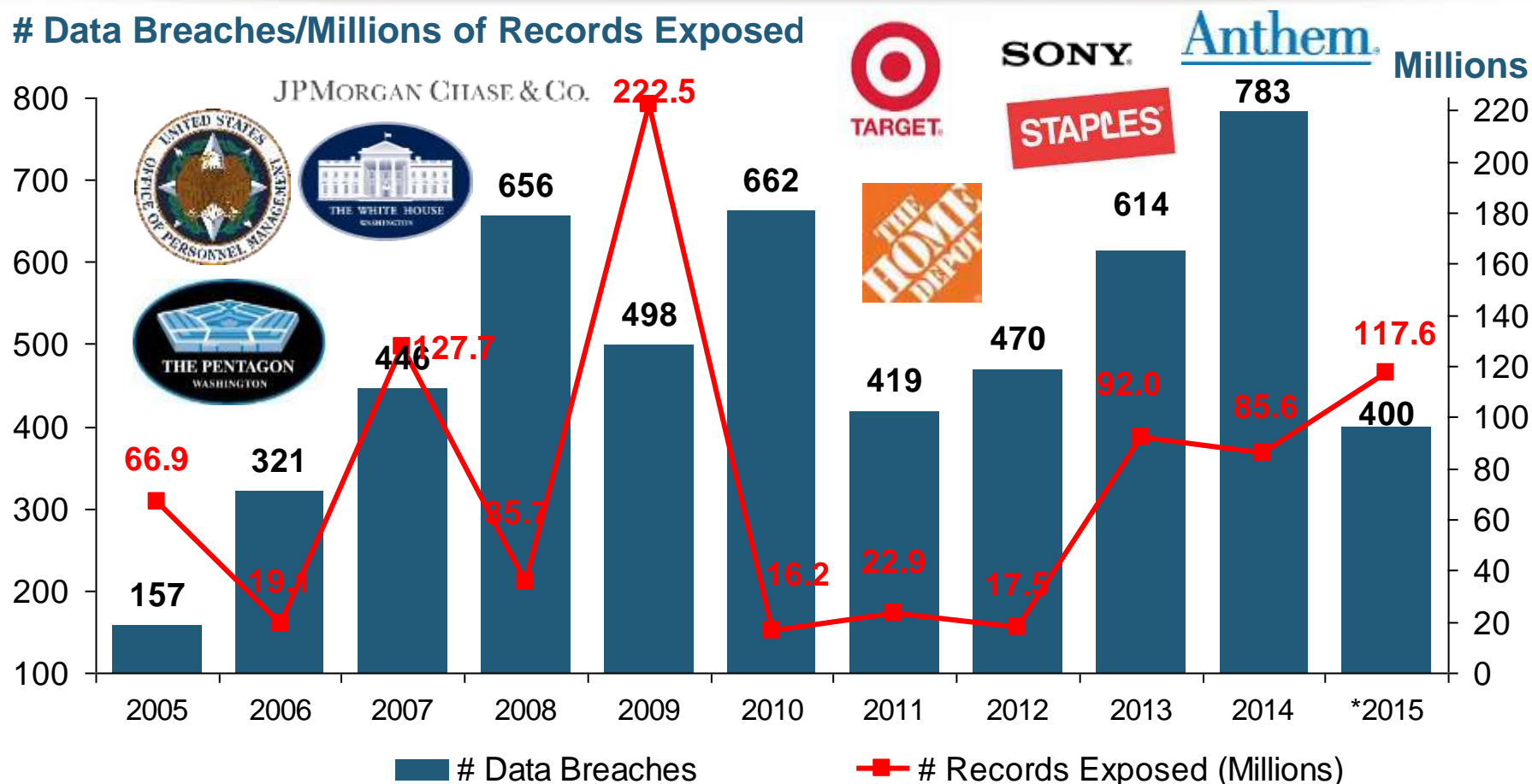
## **9. CYBER RISK & CYBER INSURANCE**

**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

# Data Breaches/Millions of 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.\***



# High Profile Data Breaches, 2014-2015

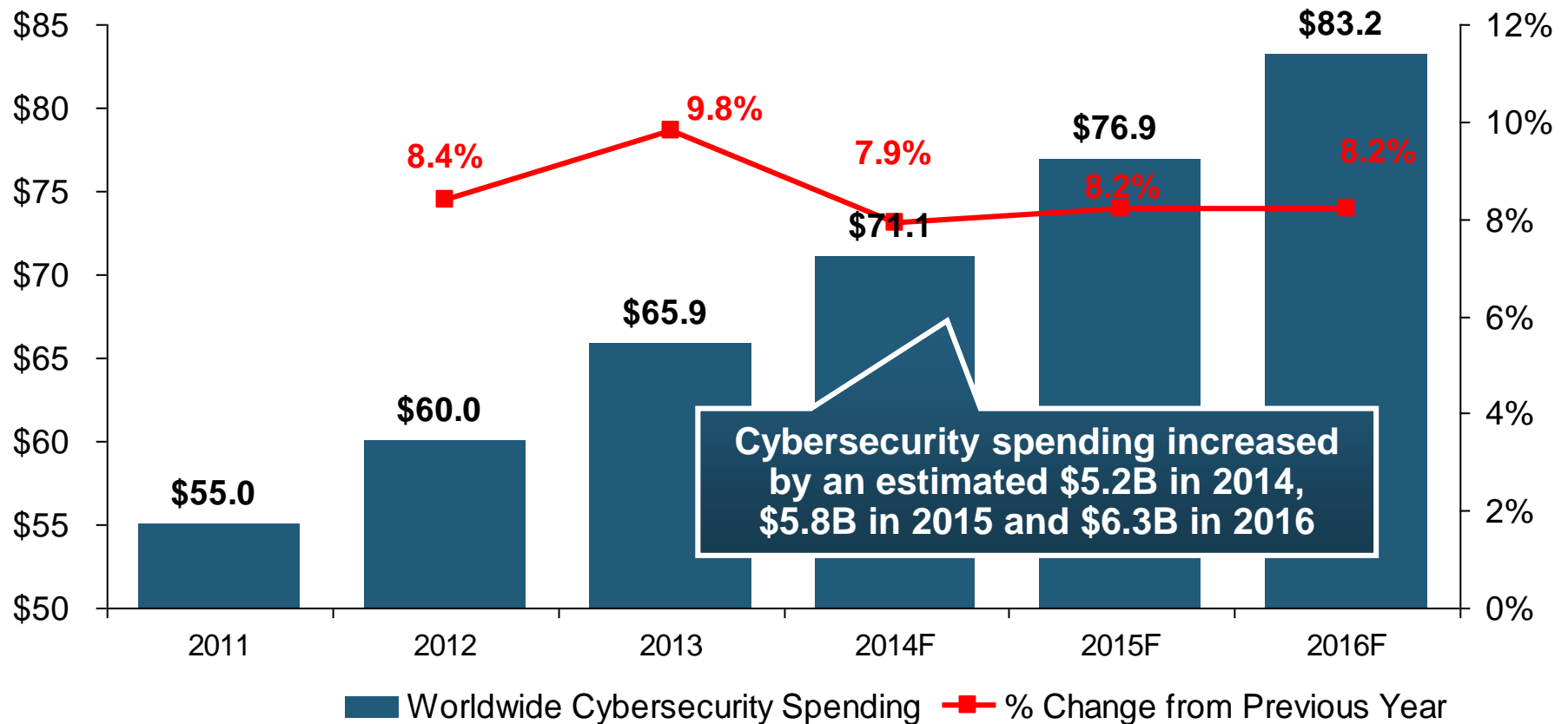
Date	Company	Description of Breach
May 2015	OPM	Hackers broke into U.S. Government Personnel Office stealing personal identifying information of as many as 14 million civilian U.S. government employees.
Mar 2015	Premiera Blue Cross	Data breach compromises financial and medical records of 11 million customers.
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 information.
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.



# Worldwide Cybersecurity Spending, 2011- 2016F

(\$ Billions)

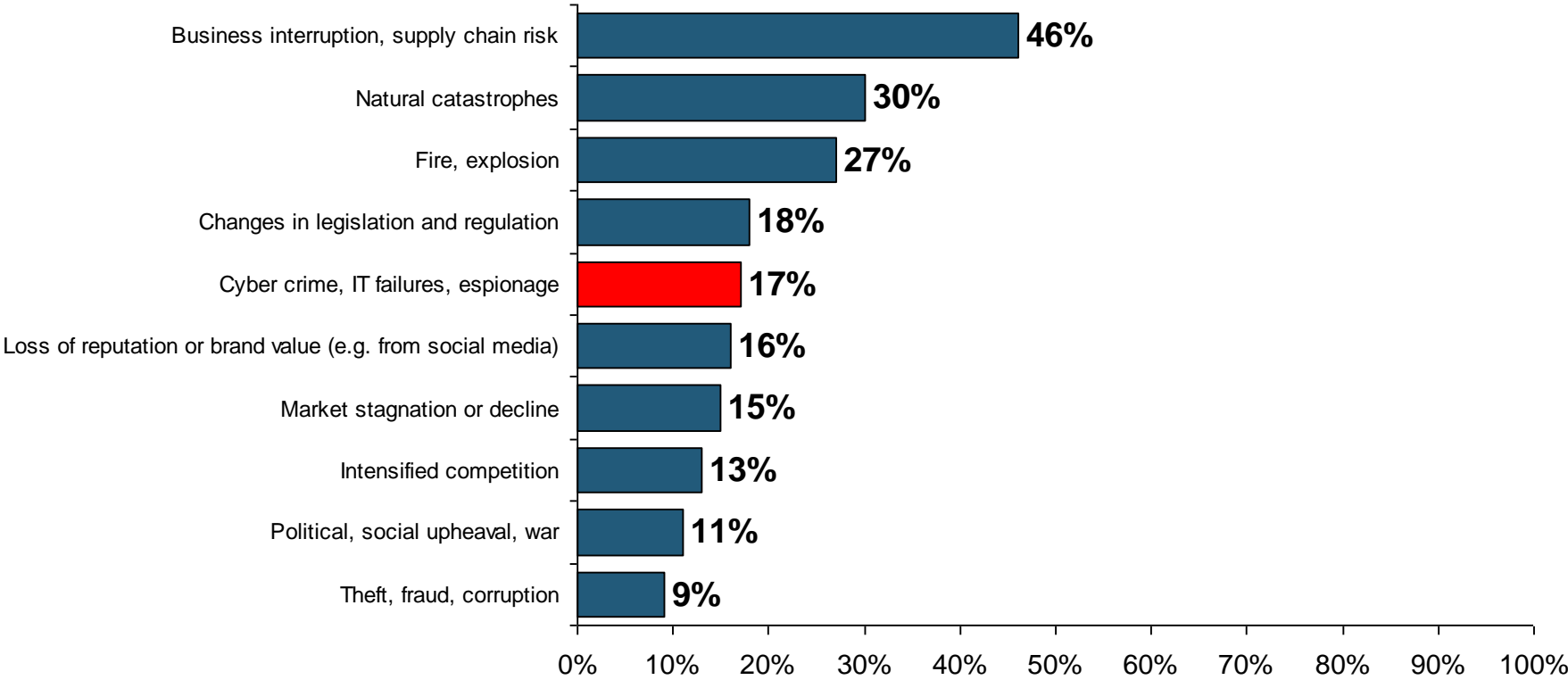


**Cybersecurity Spending Is Rising Sharply, Up by About 8%+ Annually through 2016—a Projected Increase of \$12.1 Billion from 2014 to 2016**



# Top 10 Global Business Risks for 2015

**Cyber is one of the most significant movers in this year's Risk Barometer rankings, gaining five percentage points to move into the top 5 global business risks for the first time.**

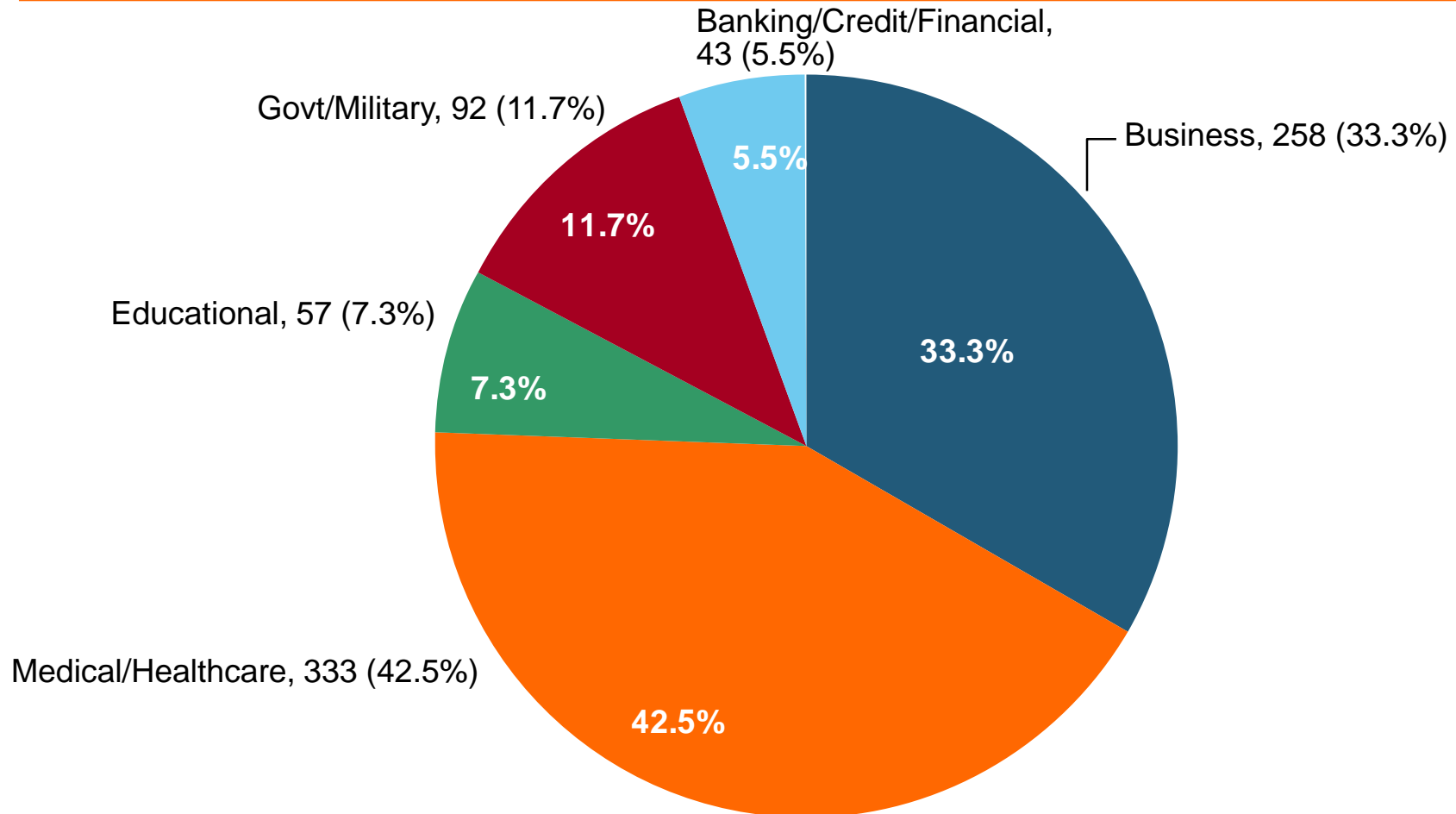


Source: Allianz Risk Barometer on Business Risks 2015



# 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.





# 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

## Hacktivism:

- Politically-motivated hackers
- Increasing capabilities

## Insiders:

- Easy access to sensitive information
- Difficult to detect

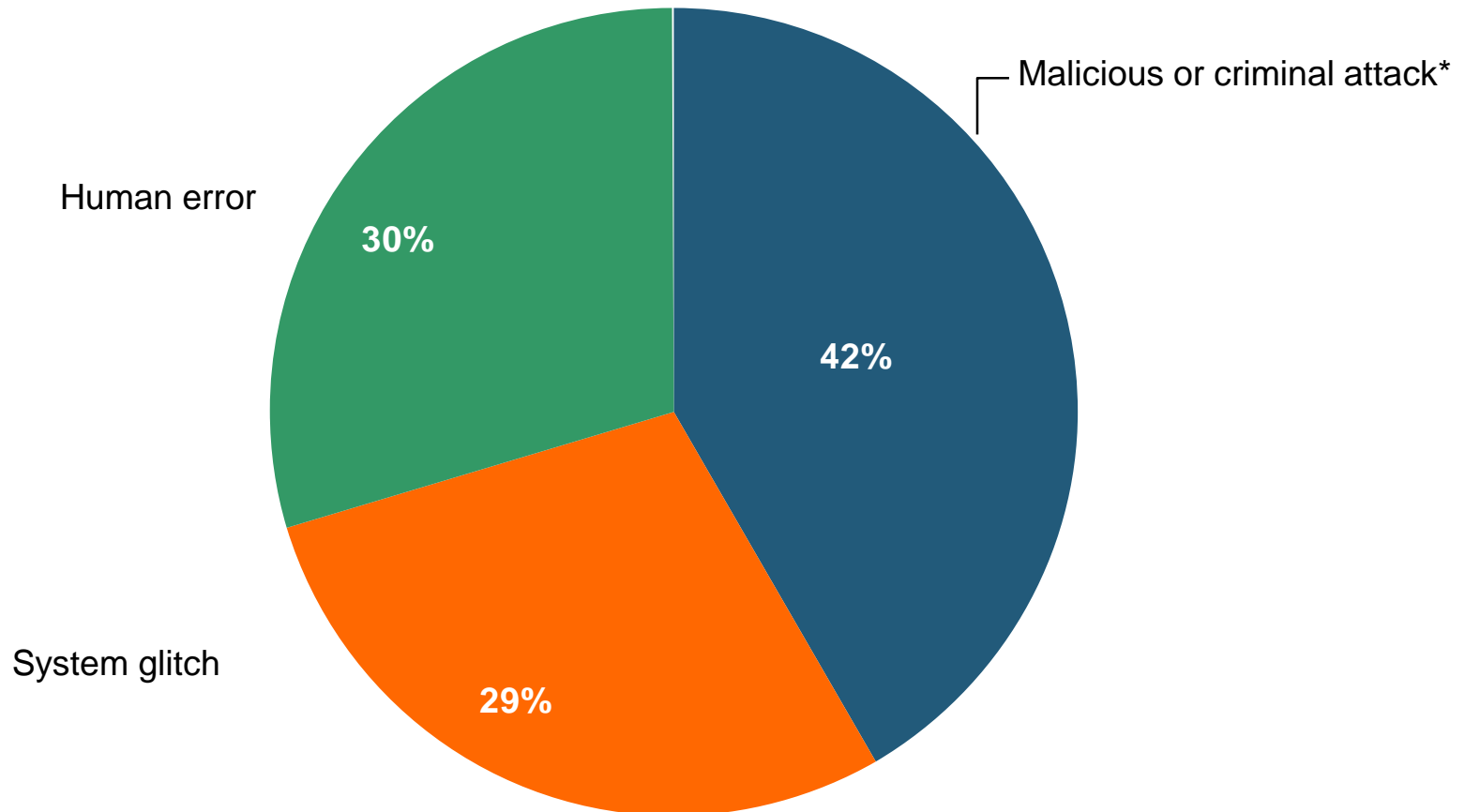
## Terrorists:

- Destruction of physical **and** digital assets



# Main Causes of Data Breach Globally

**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).**



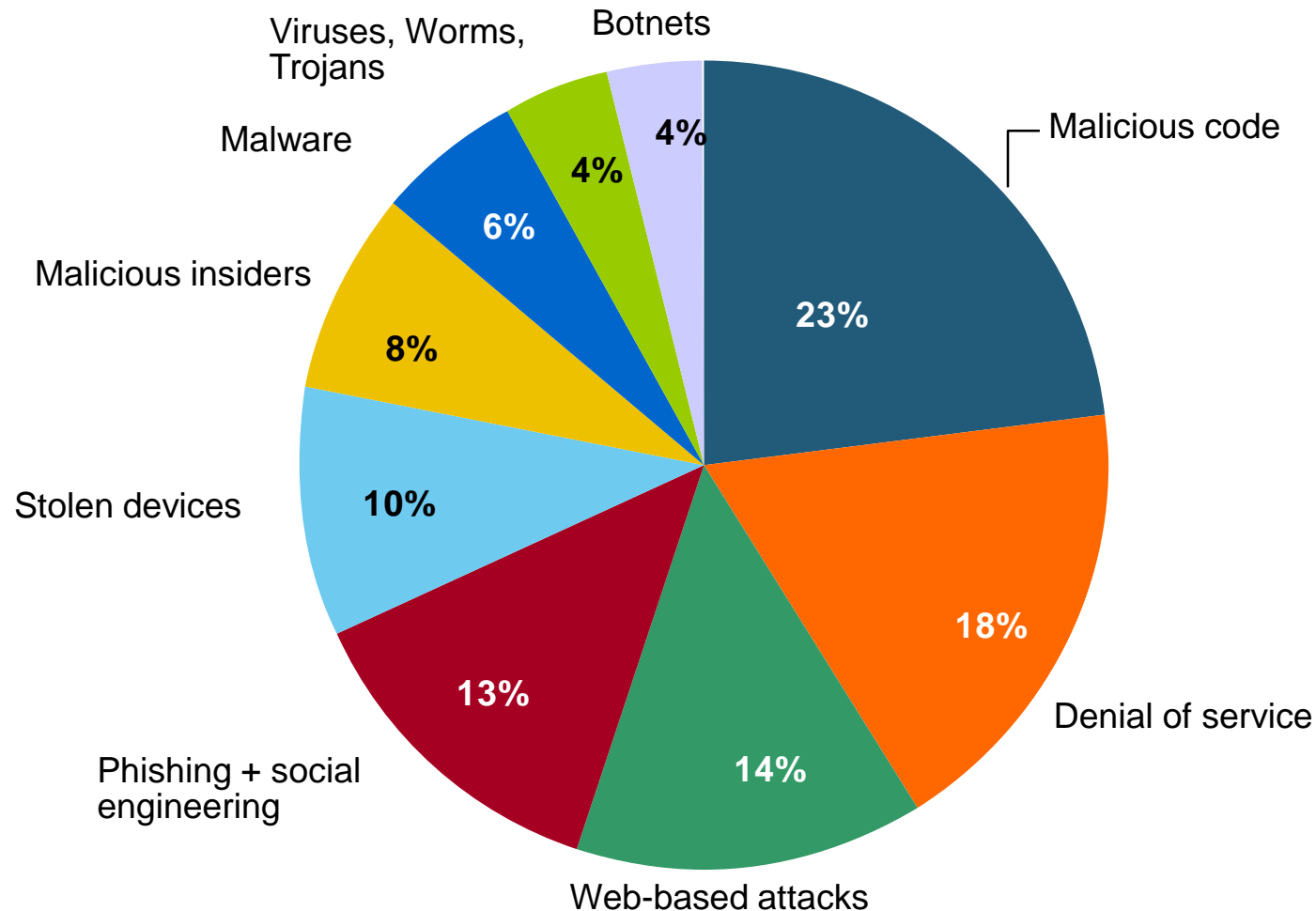
\*The most common types of malicious or criminal attacks include malware infections, criminal insiders, phishing/social engineering and SQL injection.

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

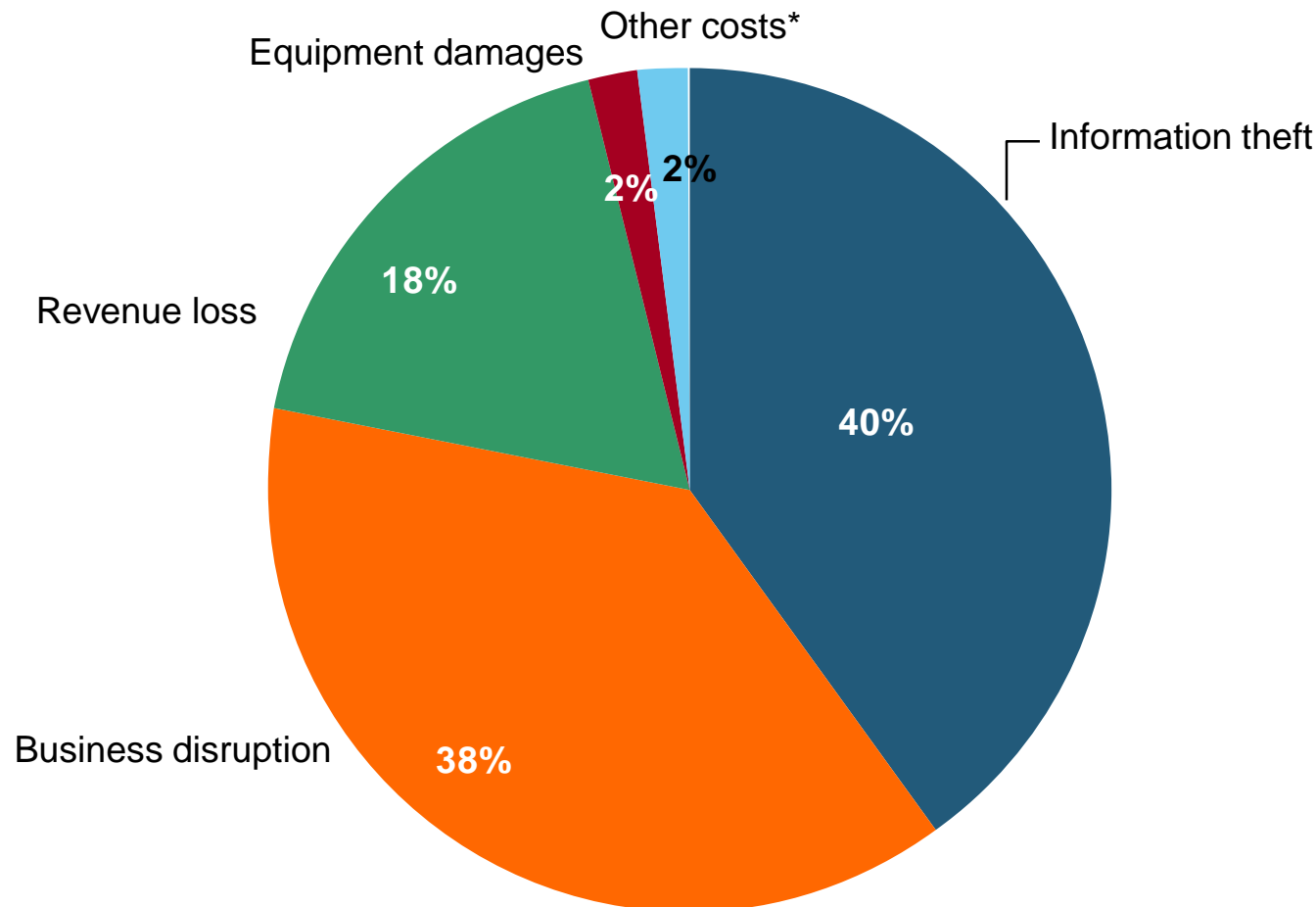
Malicious code, denial of service and web-based attacks account for more than 55 percent of the total annualized cost of cyber crime experienced by 59 U.S. companies.





# 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.**

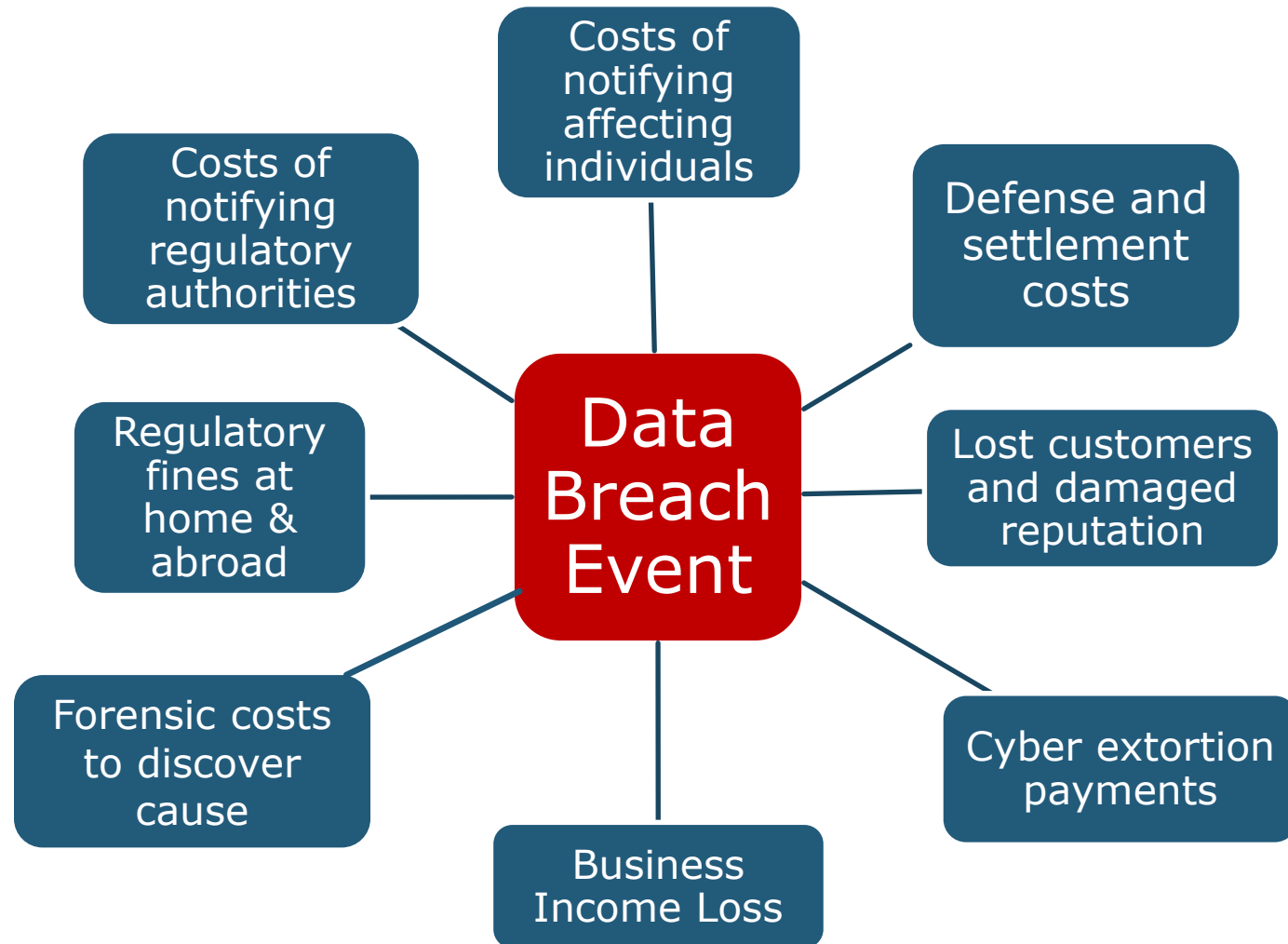


\* Other costs include direct and indirect costs that could not be allocated to a main external cost category

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

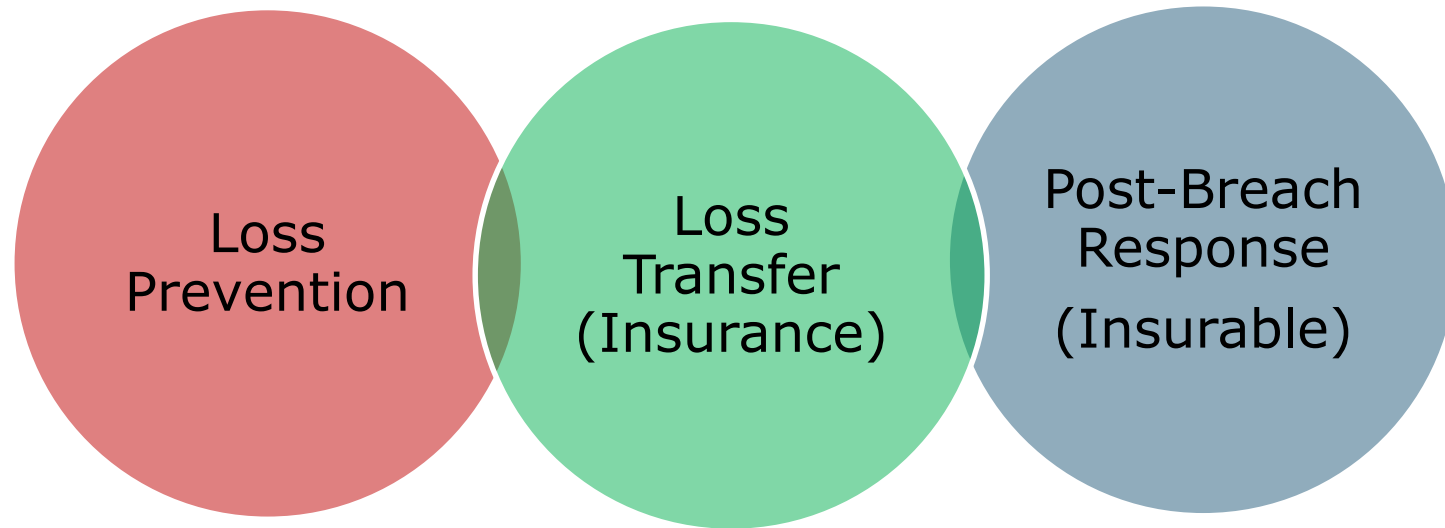


# Data/Privacy Breach: Many Potential Costs Can Be Insured





# 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*

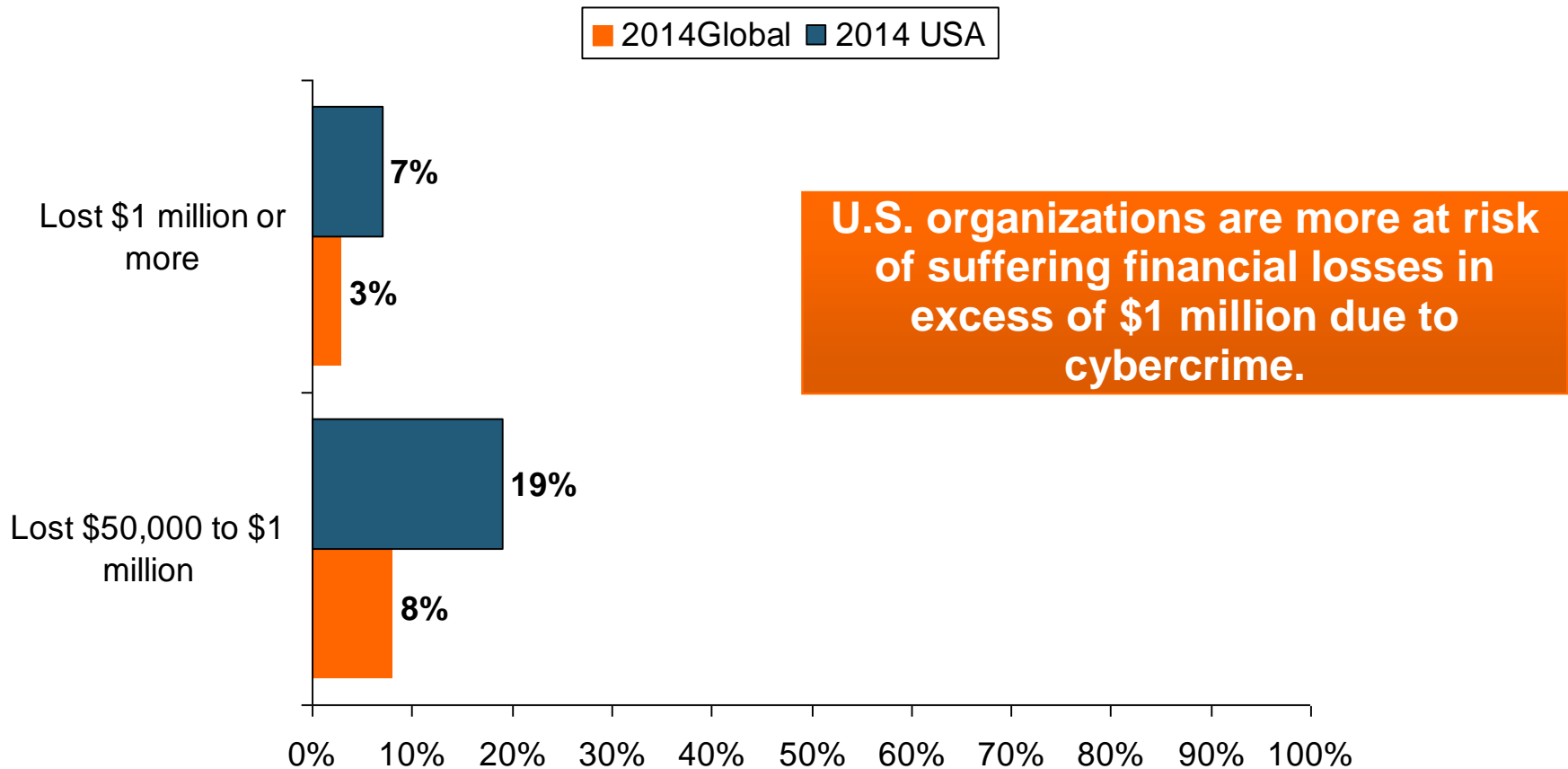


- I.I.I.'s 3<sup>rd</sup> report on cyber risk:  
*Cyber Risk: Threat and Opportunity*
- Provides information on cyber threats and insurance market solutions
- Global cyber risk overview
  - Quantification of threats by type and industry
- Cyber security and cost of attacks
- Cyber terrorism
- Cyber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

<http://www.iii.org/white-paper/cyber-risks-threat-and-opportunities-100715>



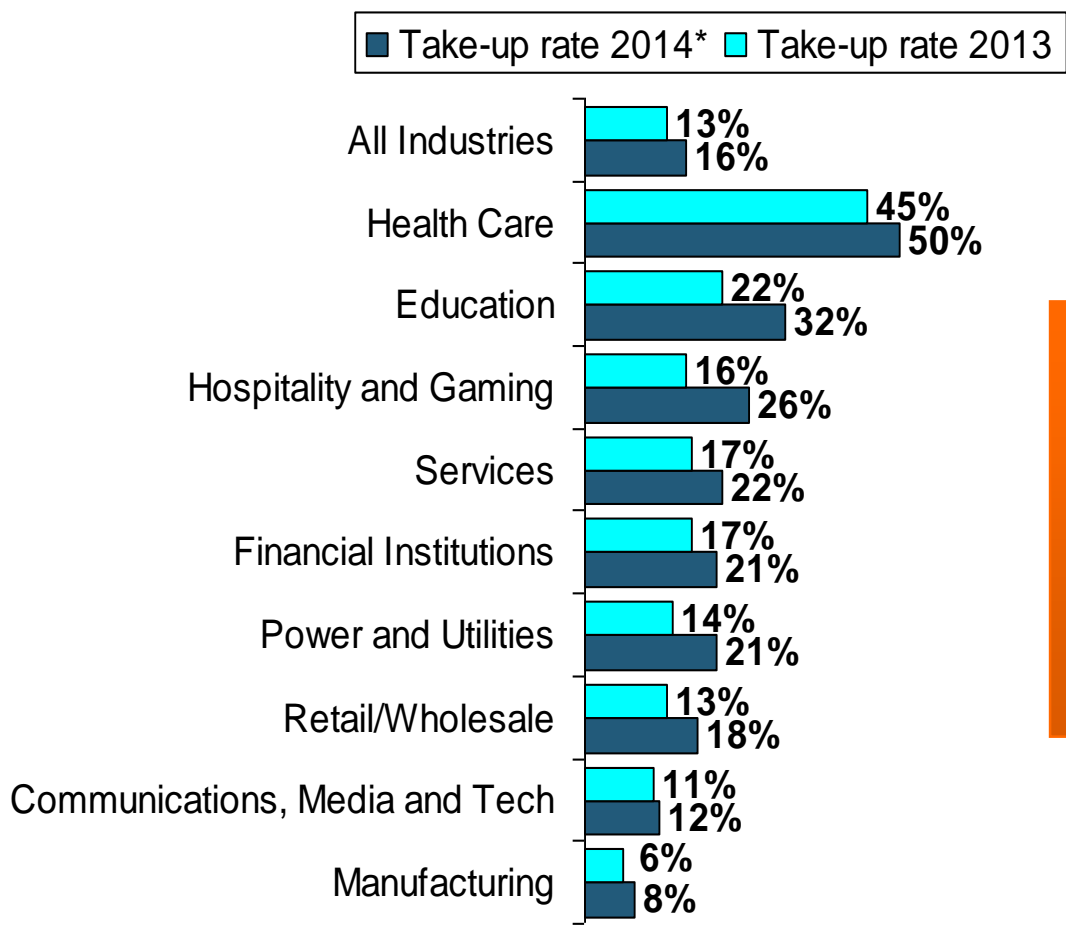
# PWC Survey: Cybercrime Costs Greater for U.S. Companies



Source: 2014 Global Economic Crime Survey, PWC.



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



Ever larger numbers of insureds seek financial protection via cyber insurance. The percentage of U.S. companies buying cyber insurance rose to 16 percent in 2014.

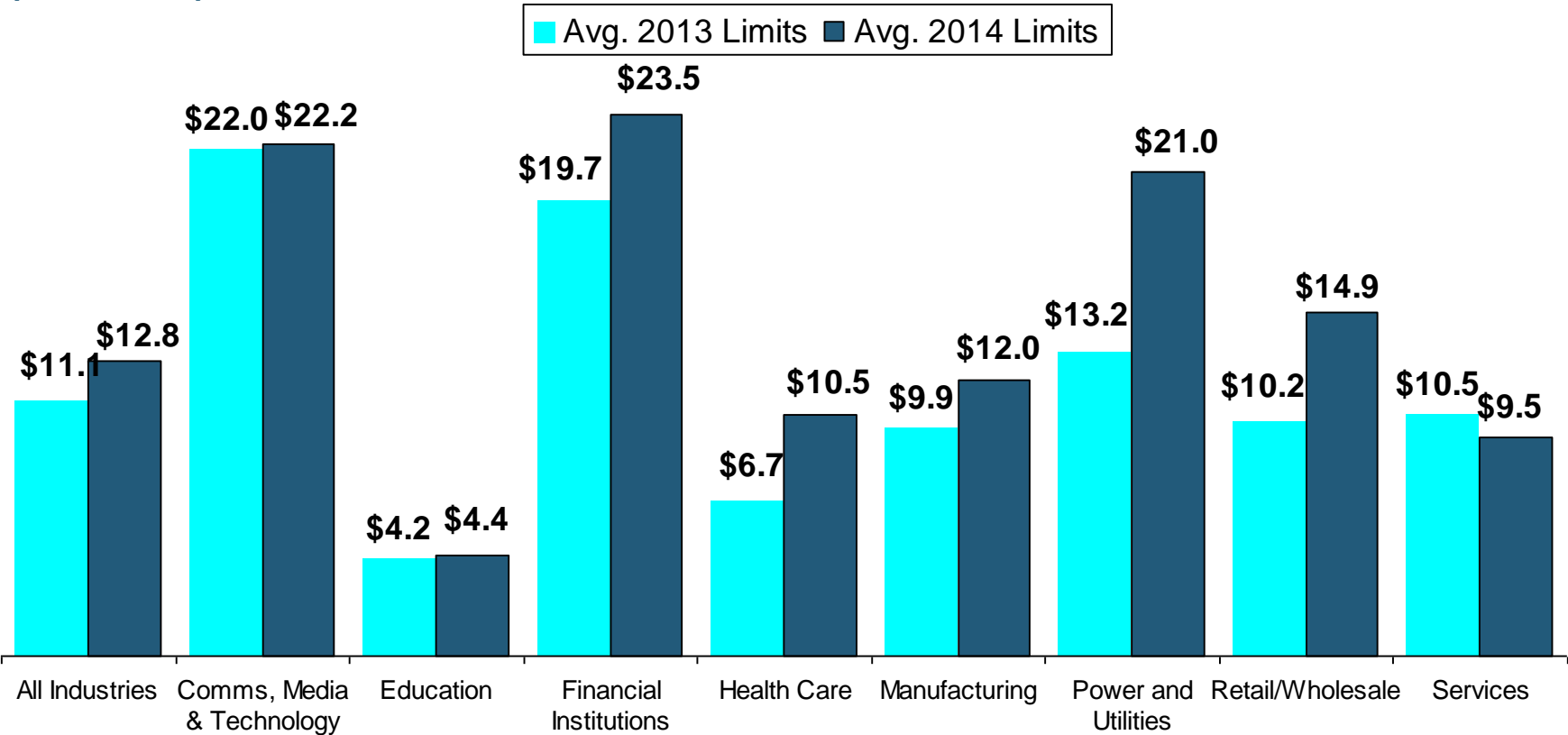
\*Take-up rate refers to the overall percentage of clients that purchased standalone cyber insurance.  
Source: *Benchmarking Trends: As Cyber Concerns Broaden, Insurance Purchases Rise*, Marsh Risk Management Research Briefing, March 2015



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

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.*

(\$ Millions)

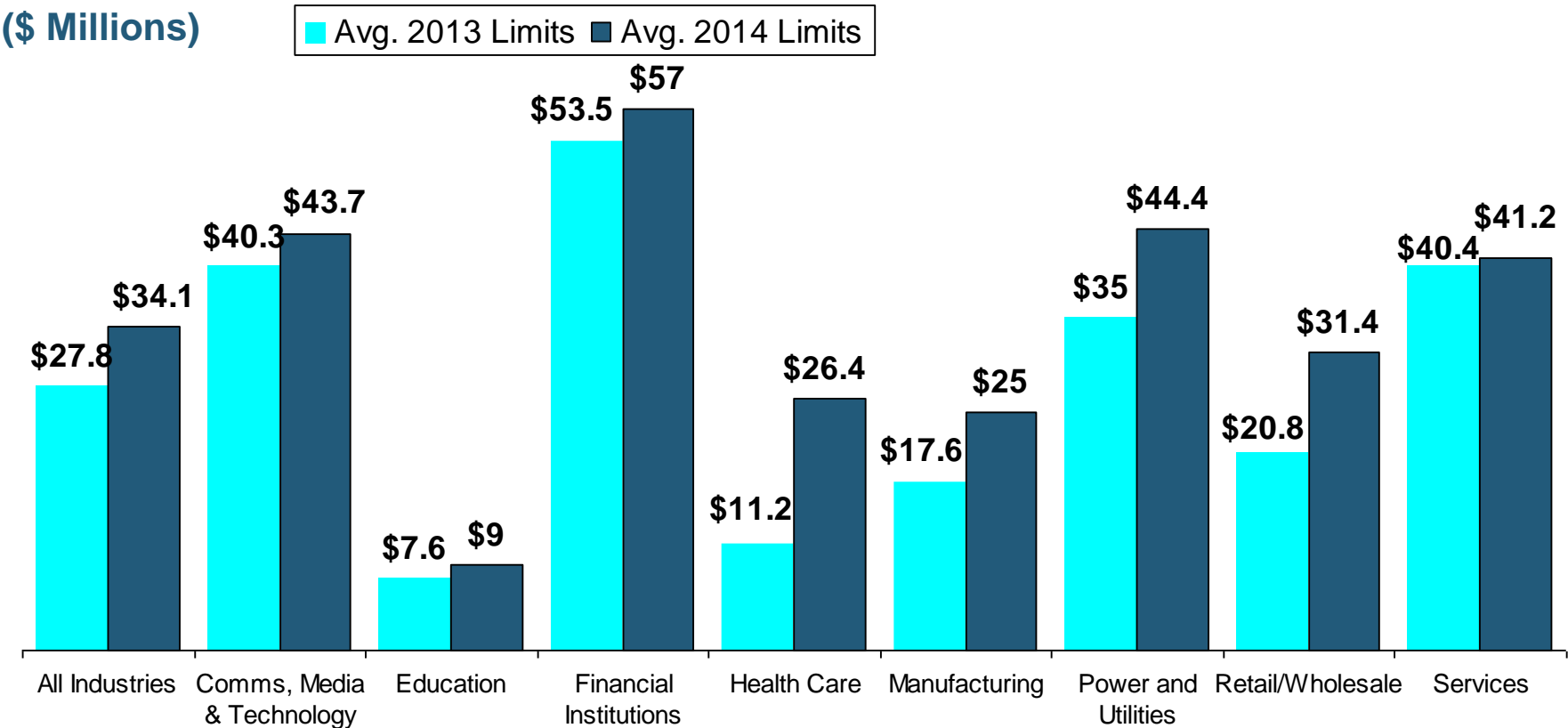


Source: *Benchmarking Trends: As Cyber Concerns Broaden, Insurance Purchases Rise*, Marsh Risk Management Research Briefing, March 2015



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

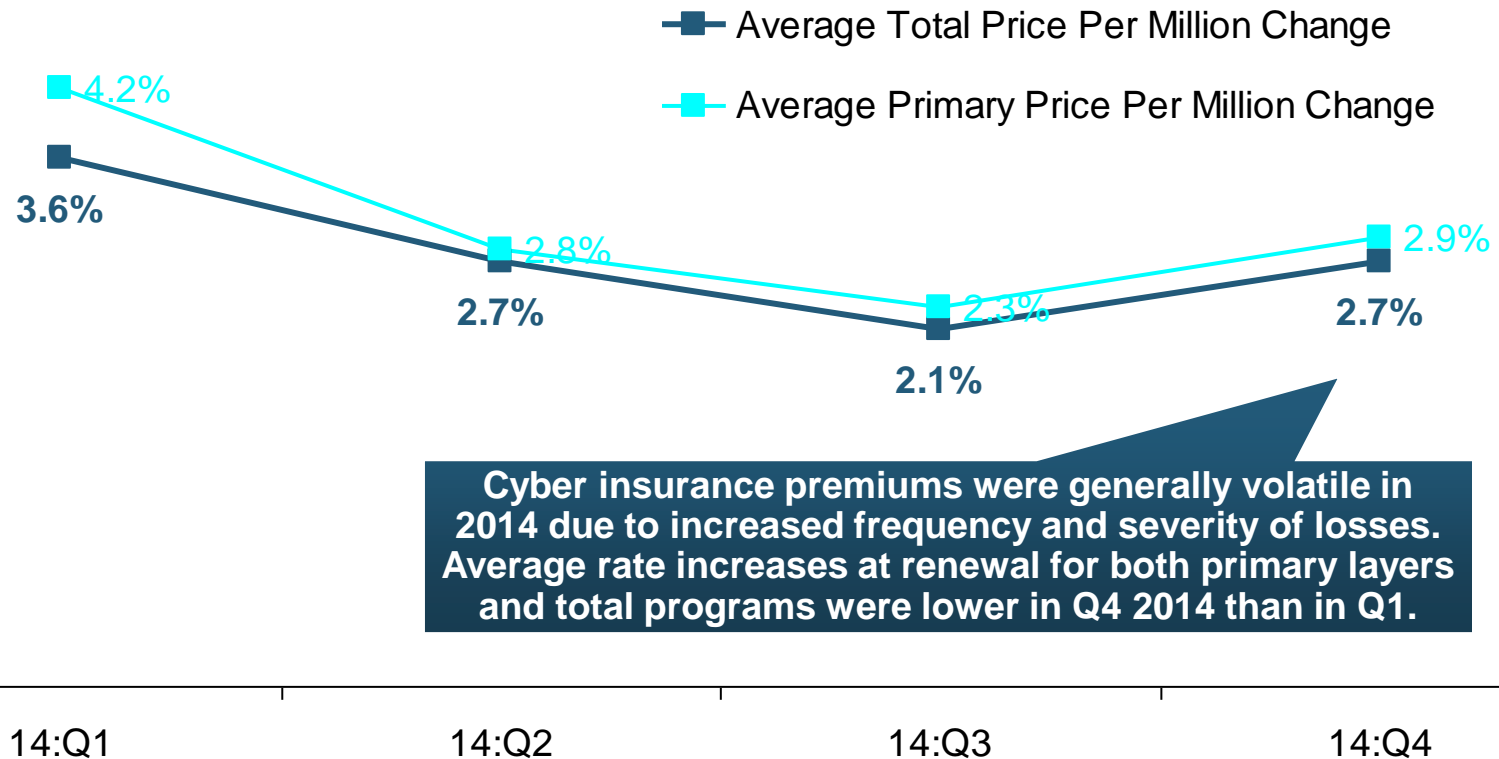
Among larger companies, average cyber insurance limits purchased increased by 22 percent to \$34.1 million in 2014, from \$27.8 million in 2013.



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





# 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**

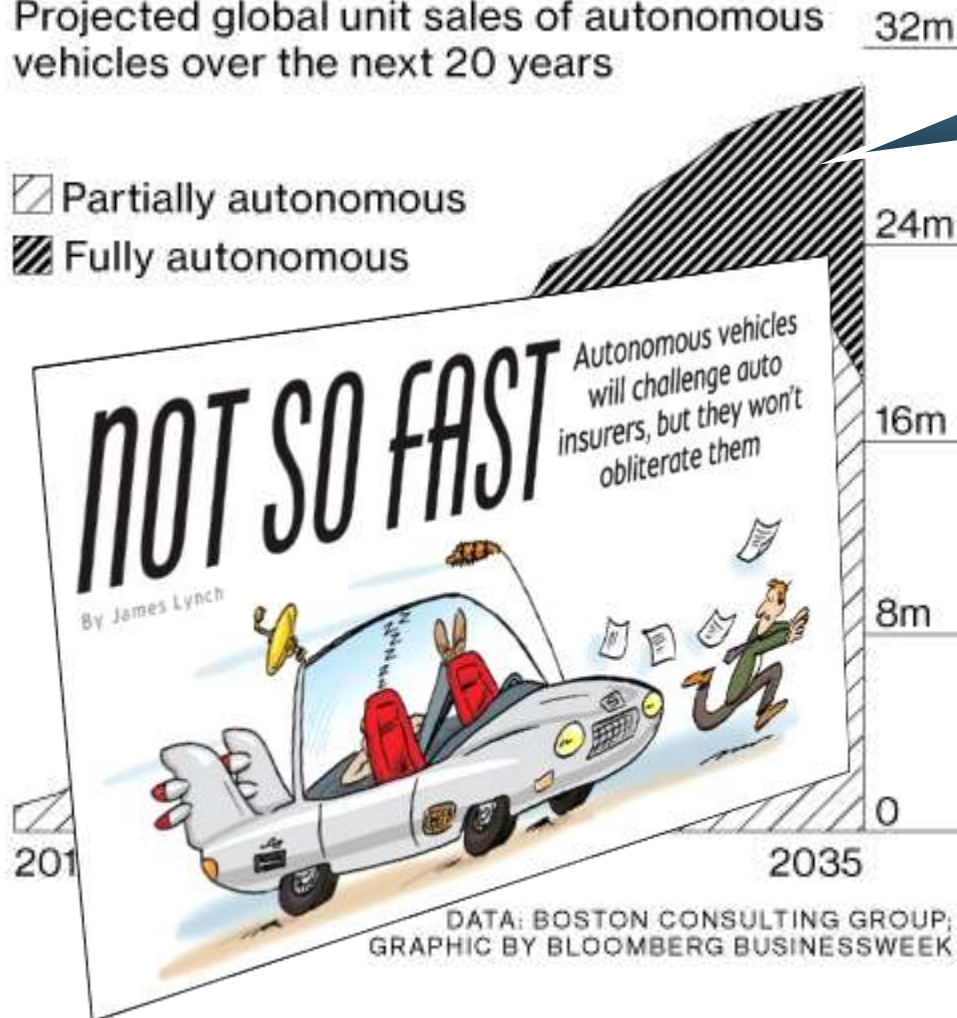


# Media is Obsessed with Driverless Vehicles: Often Predicting the Demise of Auto Insurance

## Hands-Free

Projected global unit sales of autonomous vehicles over the next 20 years

-  Partially autonomous  
 Fully autonomous



By 2035, it is estimated that 25% of new vehicle sales could be fully autonomous models

## Questions

- Are auto insurers monitoring these trends?
- How are they reacting?
- Will Google take over the industry?
- Will the number of auto insurers shrink?
- How will liability shift?



# 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



U B E R





# 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

Will **YOUR** job  
be reduced to  
an app?

**THE WALL STREET JOURNAL.**  
**There's an Uber for Everything Now**  
Apps do your chores: shopping, parking, cooking, cleaning, packing, shipping and more





# TNC Ridesharing Arrangements: Insurance Applicability

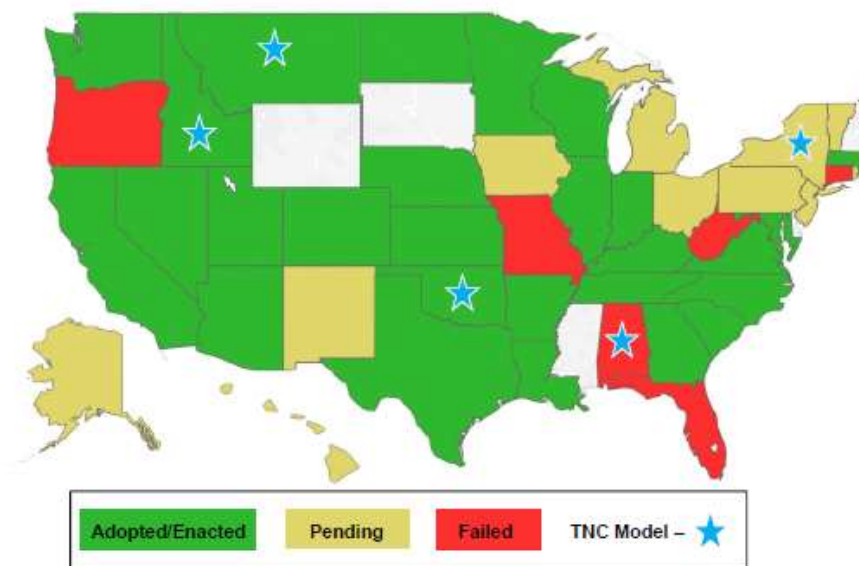
Phase	TNC Coverage
1. Driver logged into TNC App but not "matched" with a passenger	Contingent liability coverage IF personal auto coverage declined/not available (\$50/100/25)*
2. A "match" is made but passenger is not in the driver's car	Primary liability, UM/UIM coverage at a higher limit (\$1M)*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

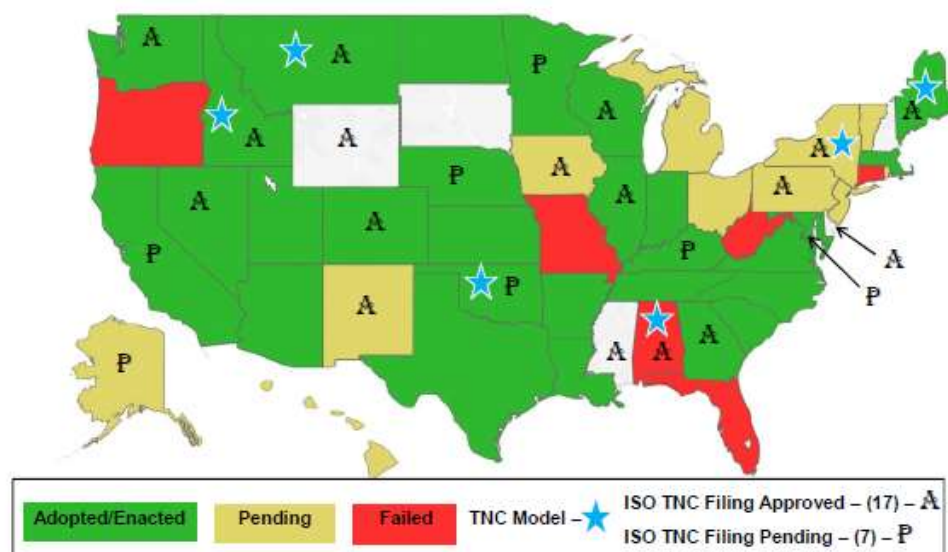


# Ridesharing Regulation/Legislation and Status of ISO Filings as of 9/30/15

## Status Ride Sharing Legislation/Regulation



## Status of ISO Filings

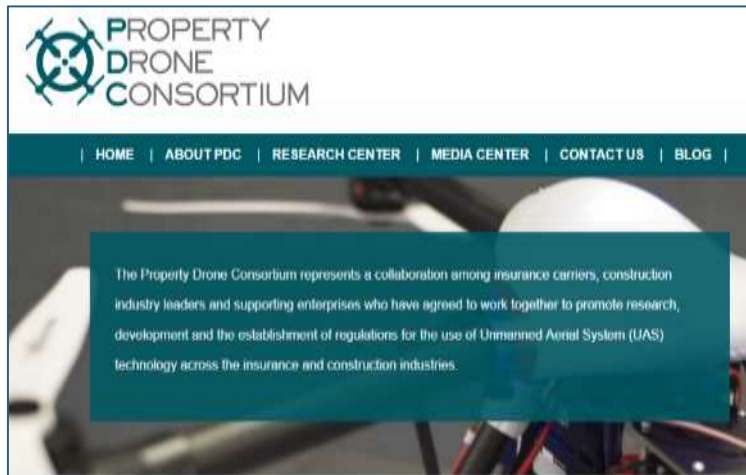




# Send in the Drones: Potential Rapid Adoption in Industry; Media Loves It



- 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, pre-event property inspections...
- Insurers partnering with construction industry to guide R&D and regulation of UAV use via *Property Drone Consortium*: [www.propertydrone.org](http://www.propertydrone.org)





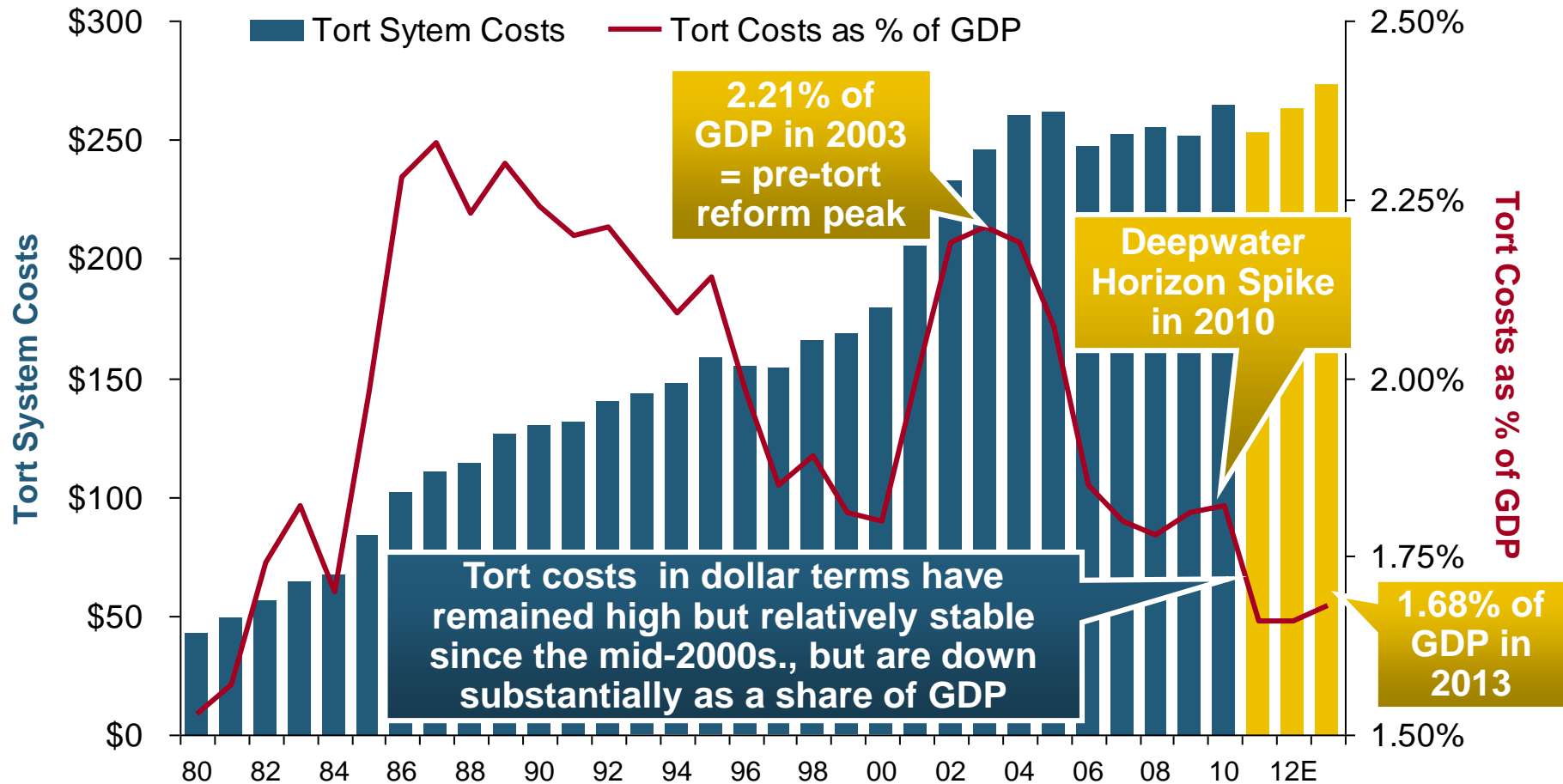
# **Shifting Legal Liability & Tort Environment**

## **Will the Tort Pendulum Swing Against Insurers?**



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

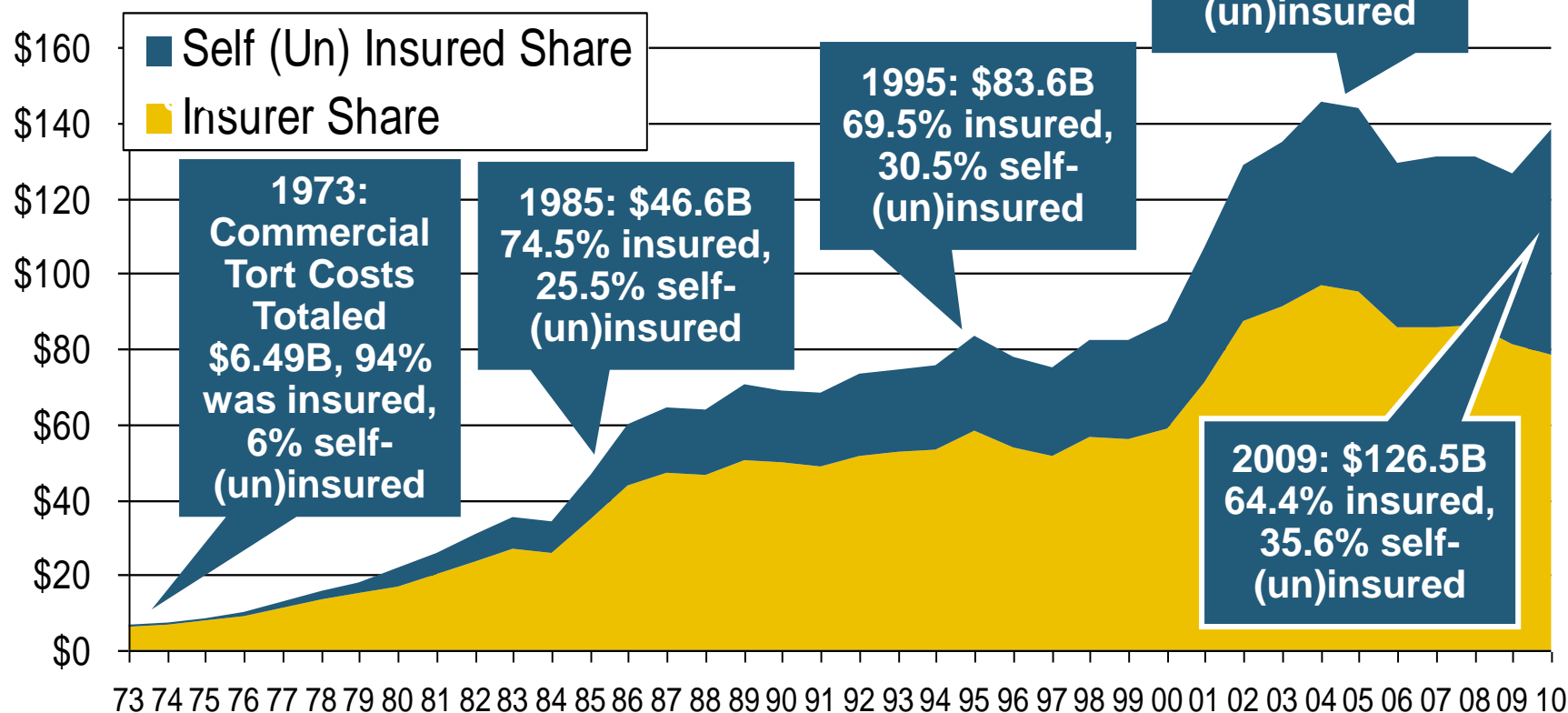
(\$ Billions)





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

Billions of Dollars

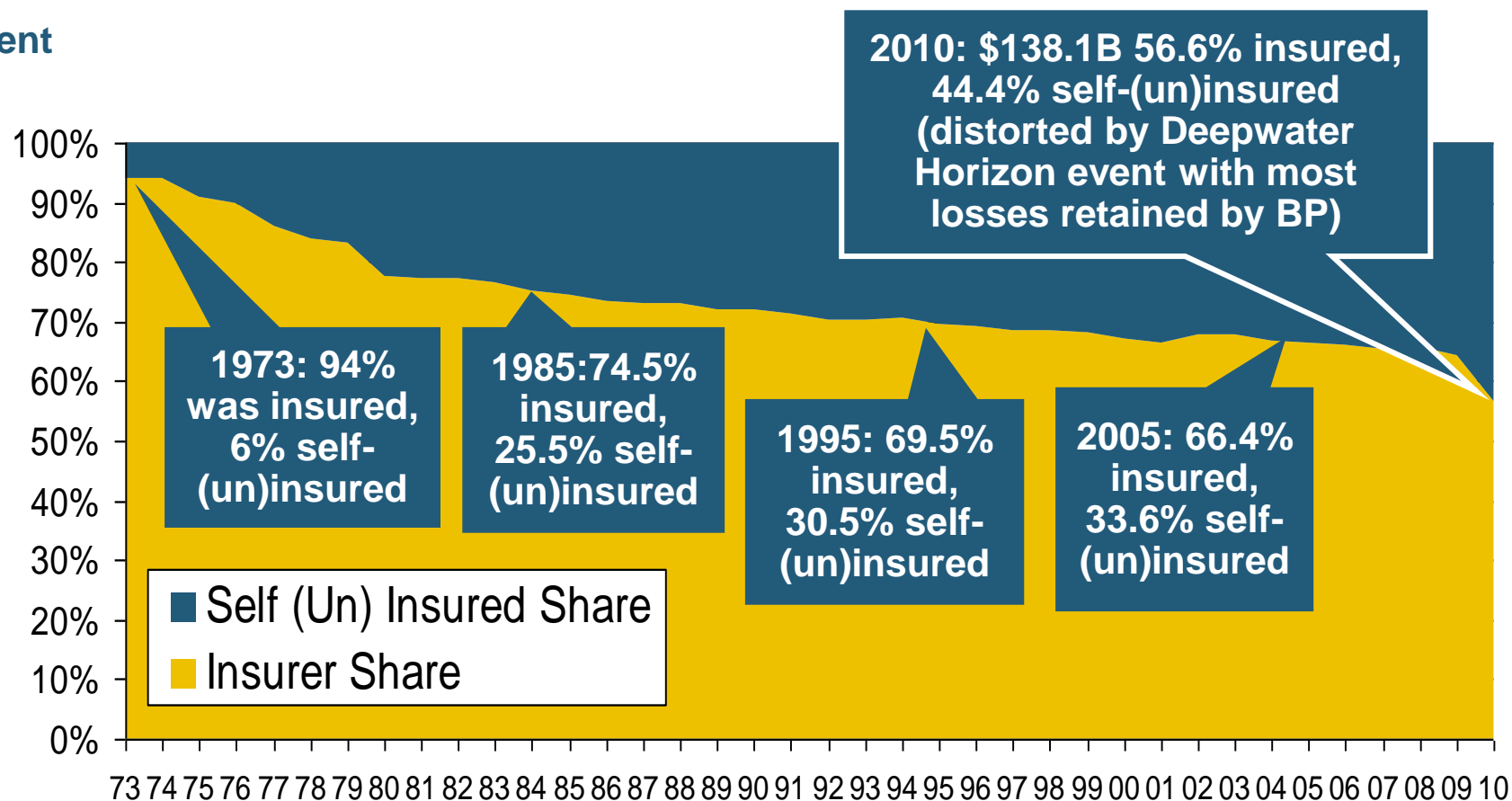


**Tort Costs and the Share Retained by Risks Both Grew Rapidly from the mid-1970s to mid-2000s, When Tort Costs Began to Fall But Self-Insurance Shares Continued to Rise**



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

Percent

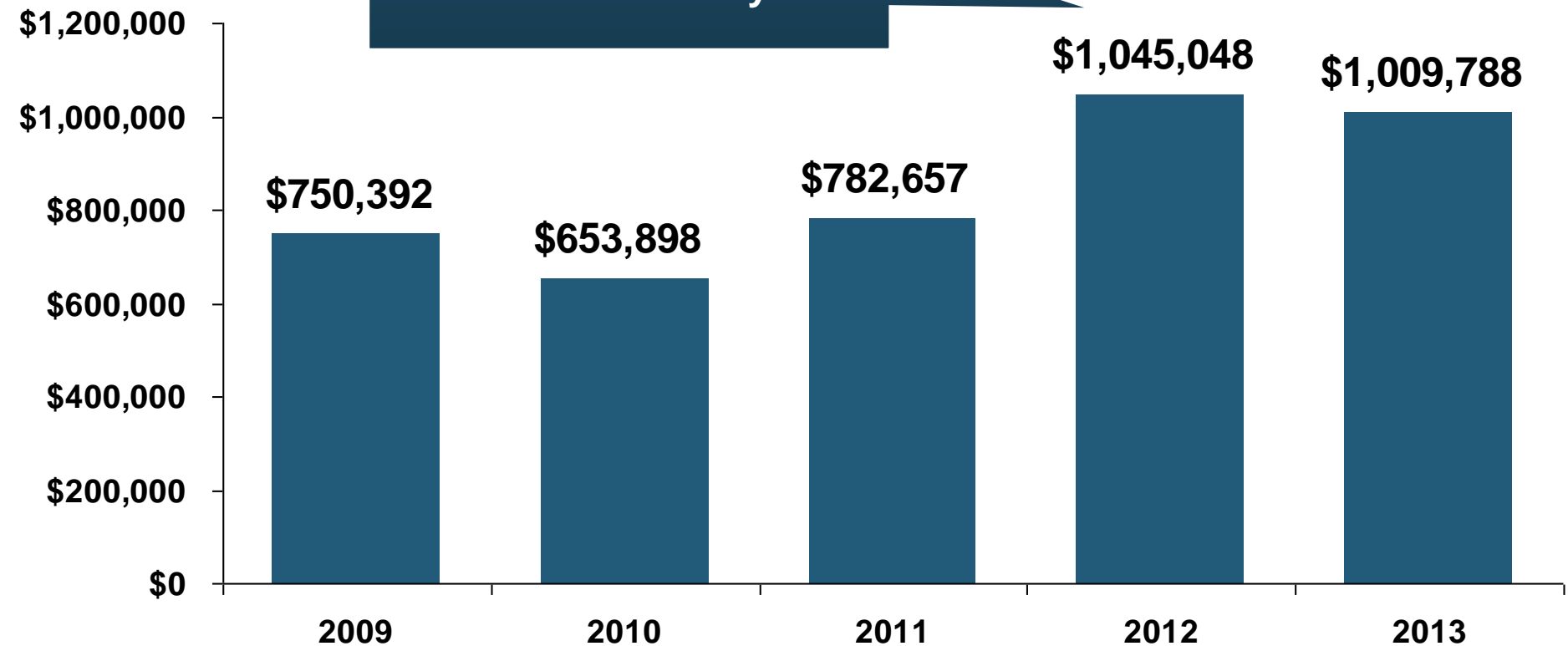


**The Share of Tort Costs Retained by Risks Has Been Steadily Increasing for Nearly 40 Years. This Trend Contributes Has Left Insurers With Less Control Over Pricing.**



# Average Personal Injury Jury Award, 2009 – 2013

Average awards in  
Personal Injury cases  
have increased by more  
than 1/3 in recent years

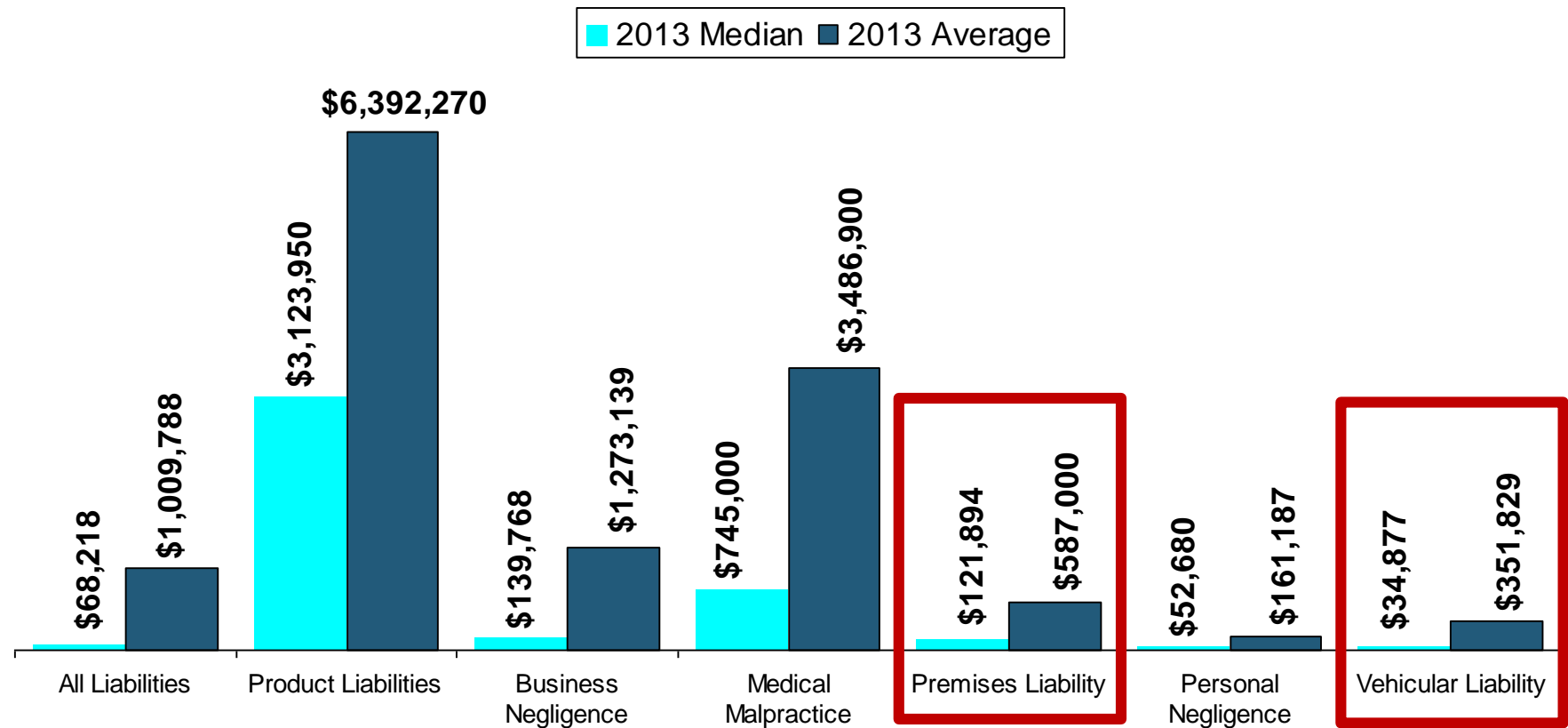


Source: *Current Award Trends in Personal Injury*, 54<sup>th</sup> Edition; Insurance Information Institute.



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

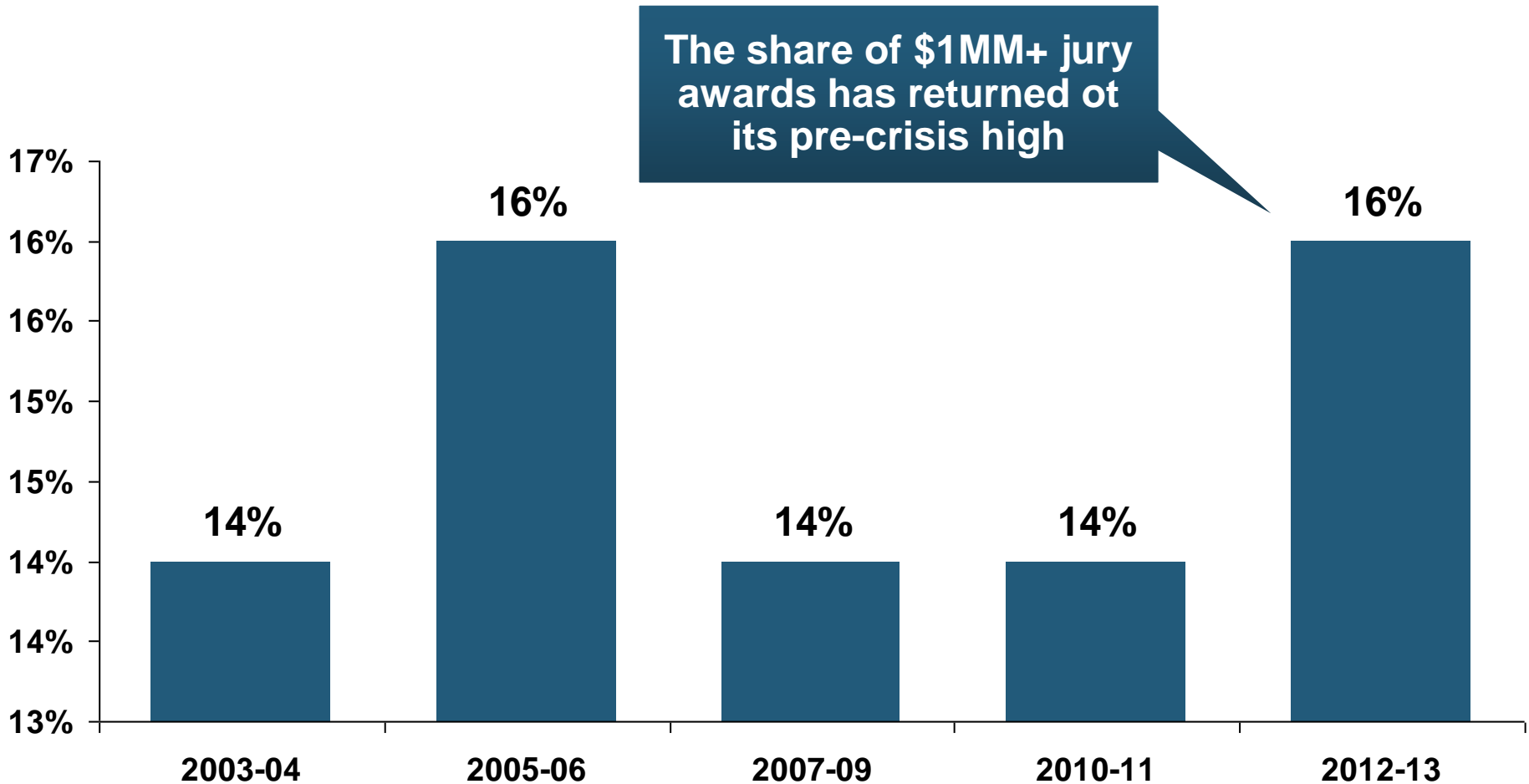
Products Liability and Medical Malpractice cases tend to have among the highest jury awards



Source: *Current Award Trends in Personal Injury*, 54<sup>th</sup> Edition; Insurance Information Institute.



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



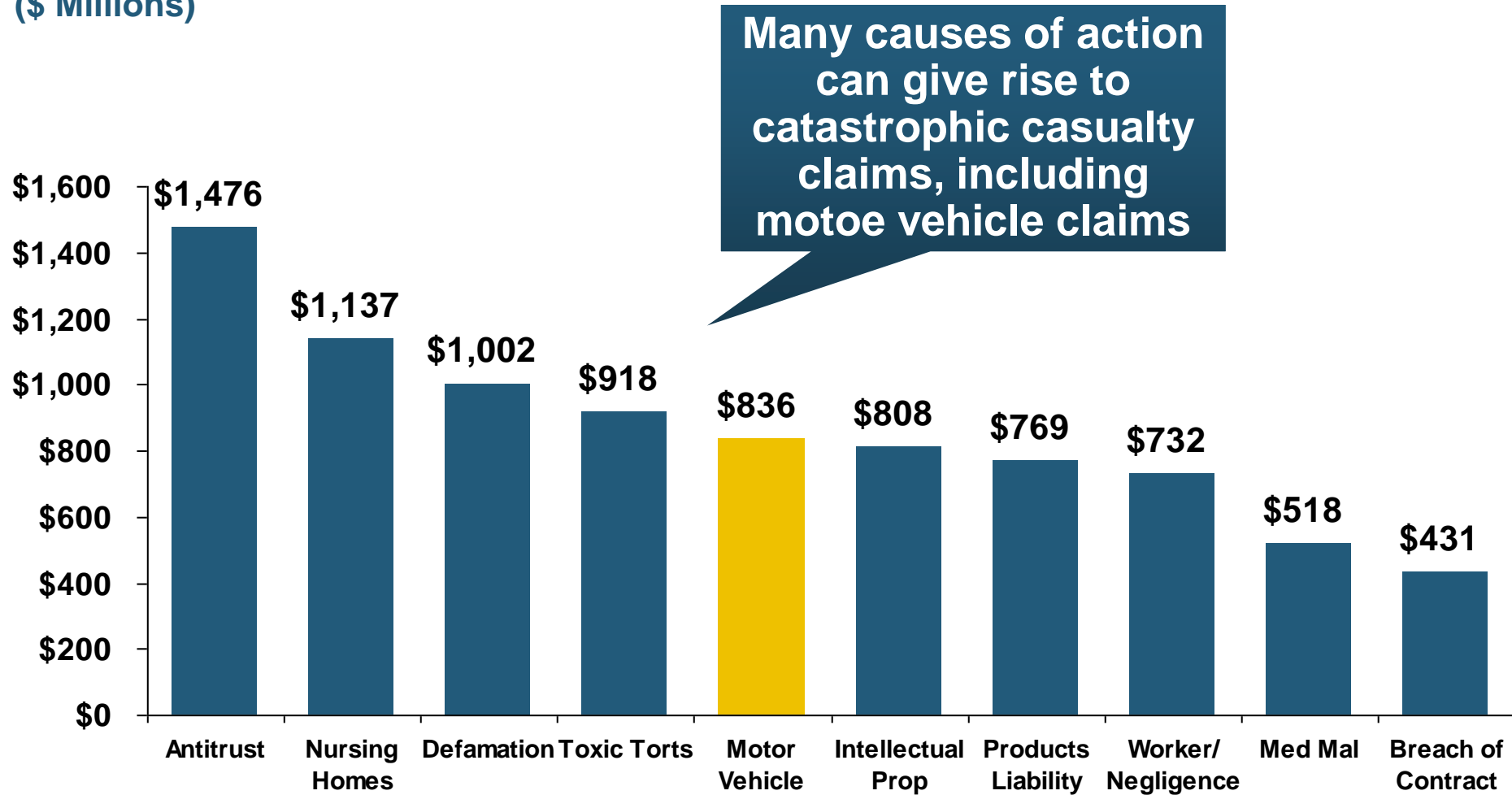
\*Latest available.

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



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

(\$ Millions)





# Business Leaders Ranking of Liability Systems in 2015

## ■ Best States

1. Delaware
2. Vermont
3. Nebraska
4. Iowa
5. New Hampshire
6. Idaho
7. North Carolina
8. Wyoming
9. South Dakota
10. Utah

### New in 2015

- Vermont
- New Hampshire
- North Carolina
- South Dakota

### Drop-offs

- Minnesota
- Kansas
- Virginia
- North Dakota

## ■ Worst States

41. Arkansas
42. Missouri
43. Mississippi
44. Florida
45. New Mexico
46. Alabama
47. California
48. Illinois
49. Louisiana
50. West Virginia

### Newly Notorious

- Arkansas
- Missouri

### Rising Above

- Oklahoma
- Montana



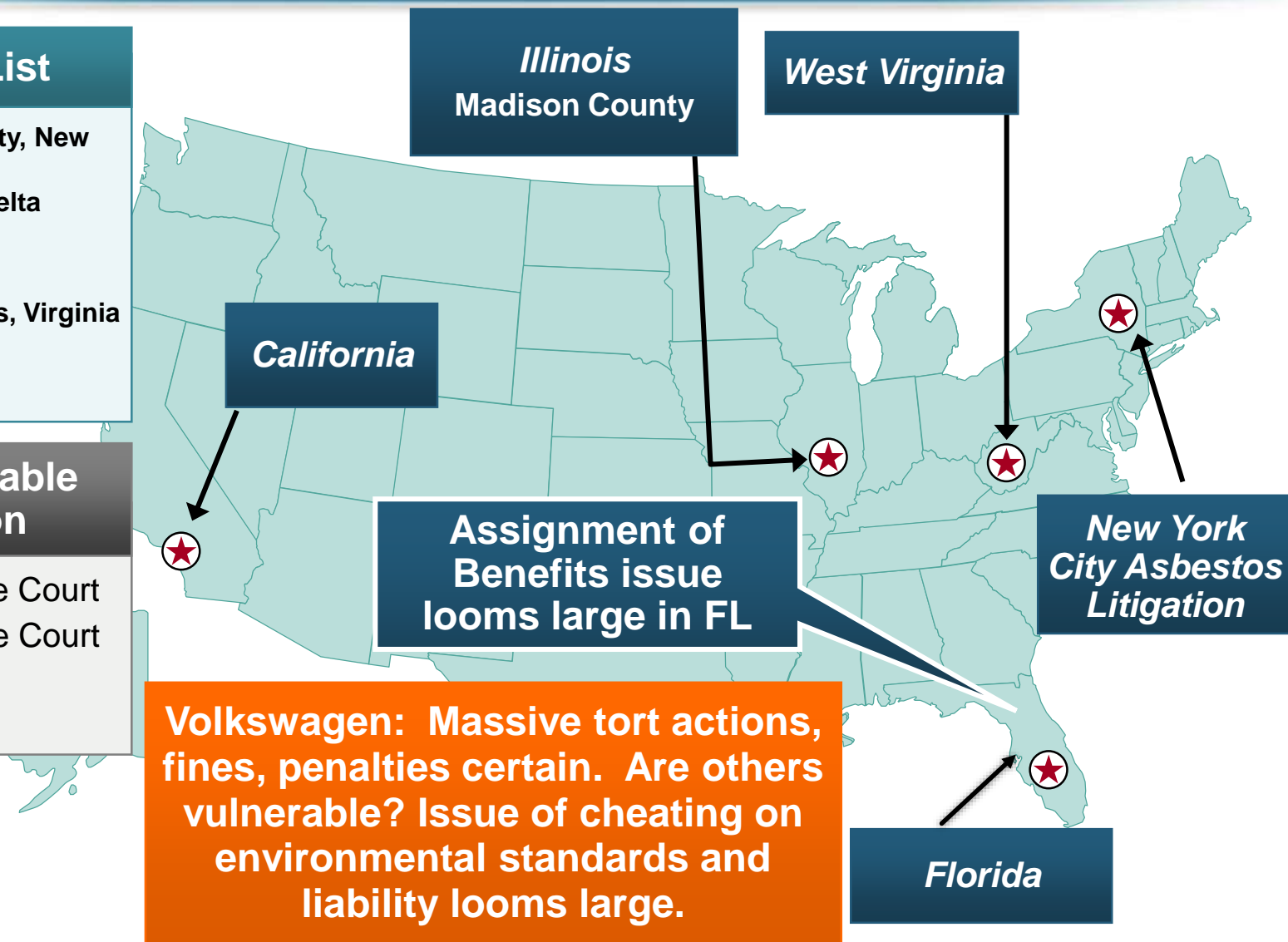
# The Nation's Judicial "Hellholes": 2014/2015

## Watch List

- Atlantic County, New Jersey
- Mississippi Delta
- Montana
- Nevada
- Newport News, Virginia
- Philadelphia, Pennsylvania

## Dishonorable Mention

- AL Supreme Court
- PA Supreme Court





Insurance Information Institute Online:

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and your attention!*

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