



# Trends and Opportunities in P&C Insurance Industry: Focus on Midwest Markets

**Chicago, IL**

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***Download at [www.iii.org/presentations](http://www.iii.org/presentations)***

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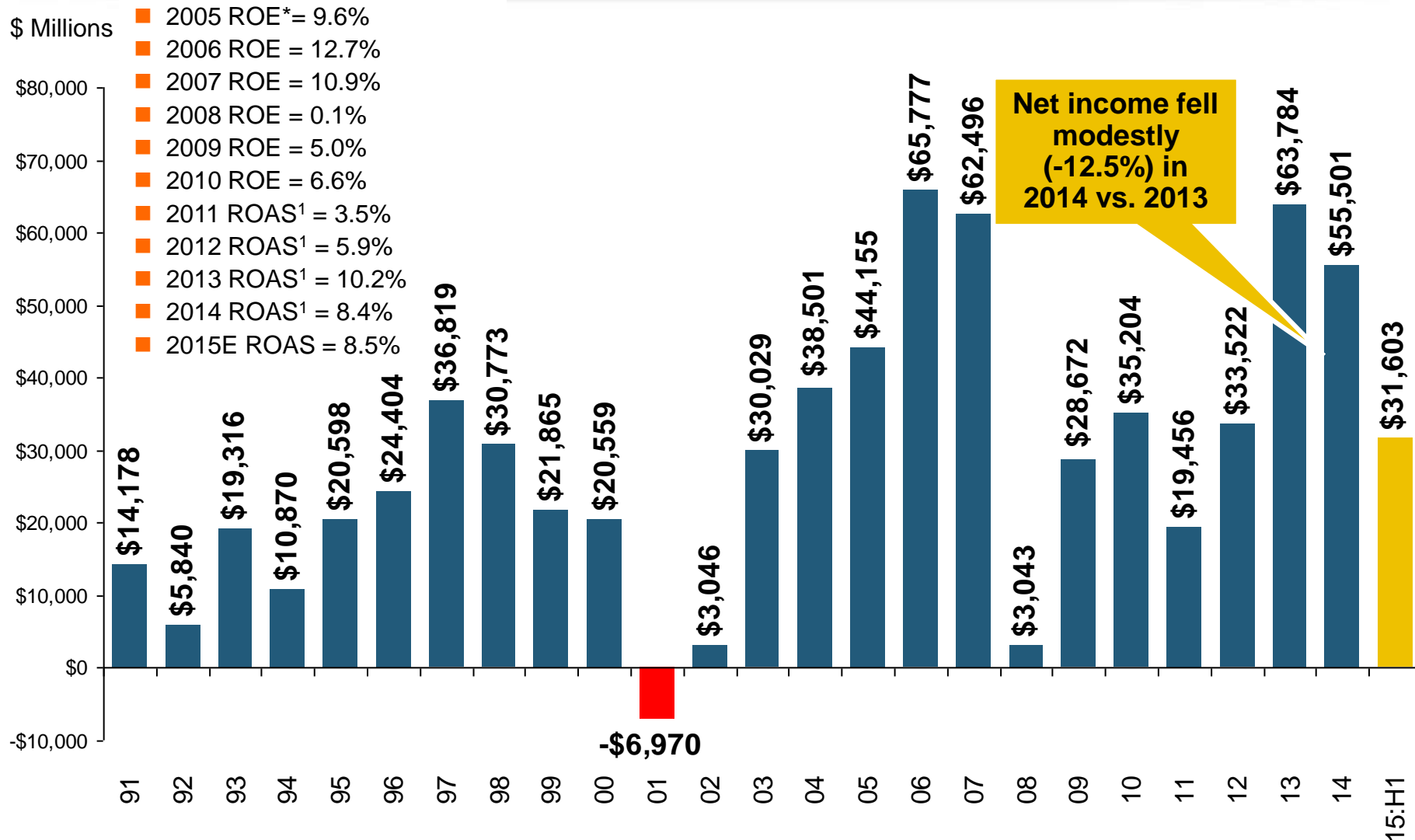
**Tel: 212.346.5533 ♦ Cell: 917.359.3908 ♦ [jamesl@iii.org](mailto:jamesl@iii.org) ♦ [www.iii.org](http://www.iii.org)**



# **Insurance Industry: *Financial Update & Outlook***

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

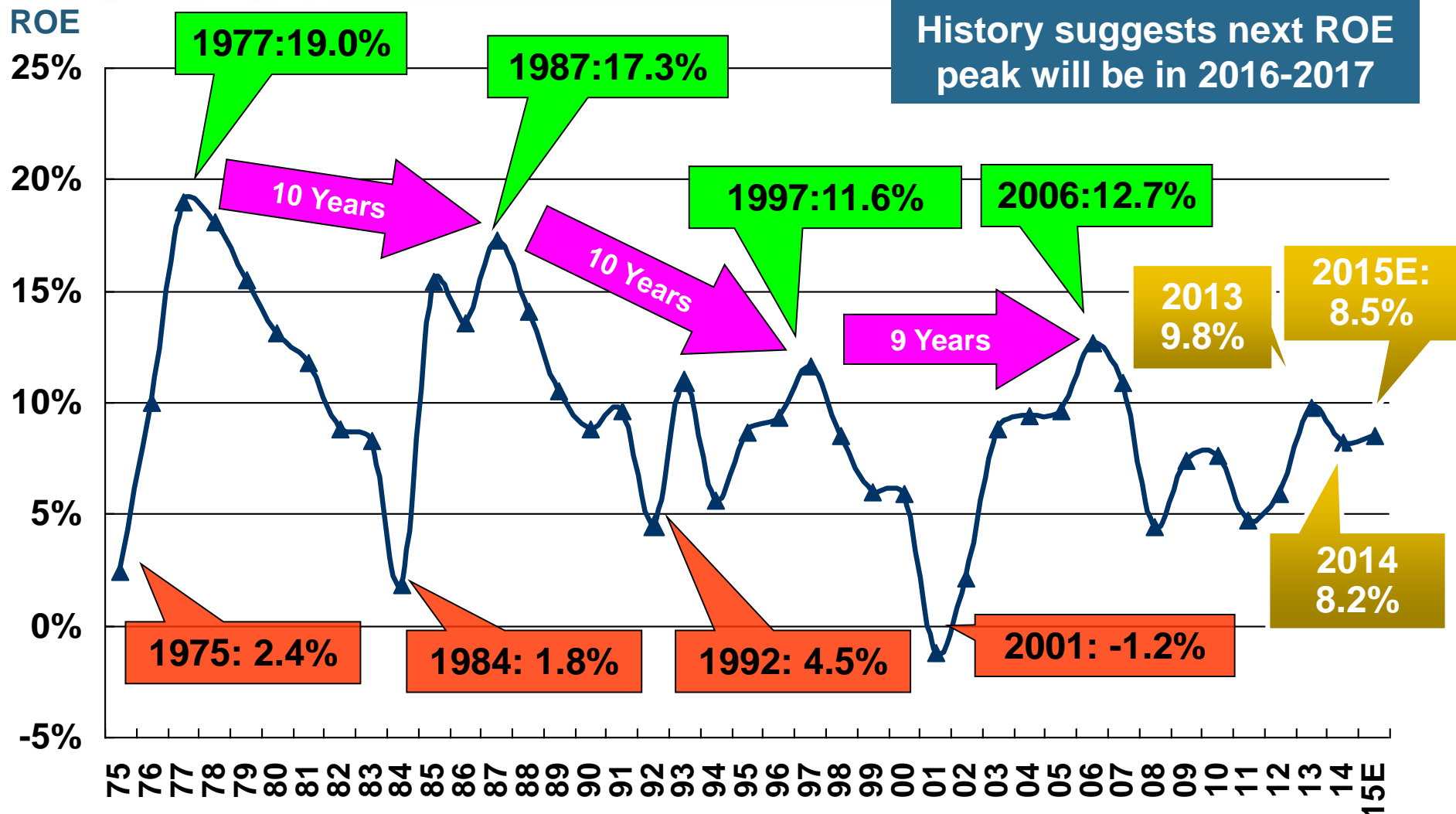
# P/C Industry Net Income After Taxes 1991–2015:H1



\*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

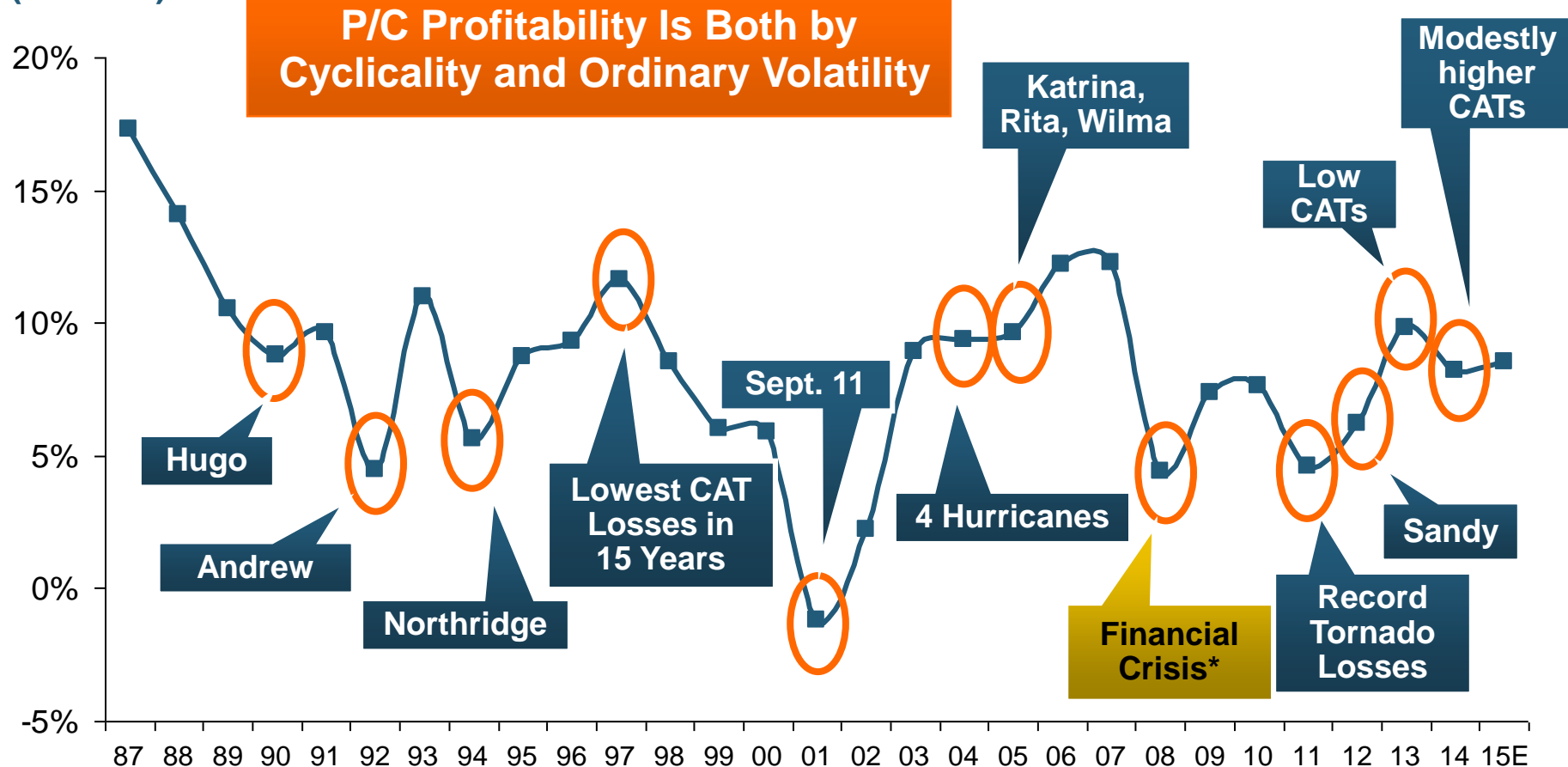


\*Profitability = P/C insurer ROEs. 2011-14 figures are estimates based on ROAS data. Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers.

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

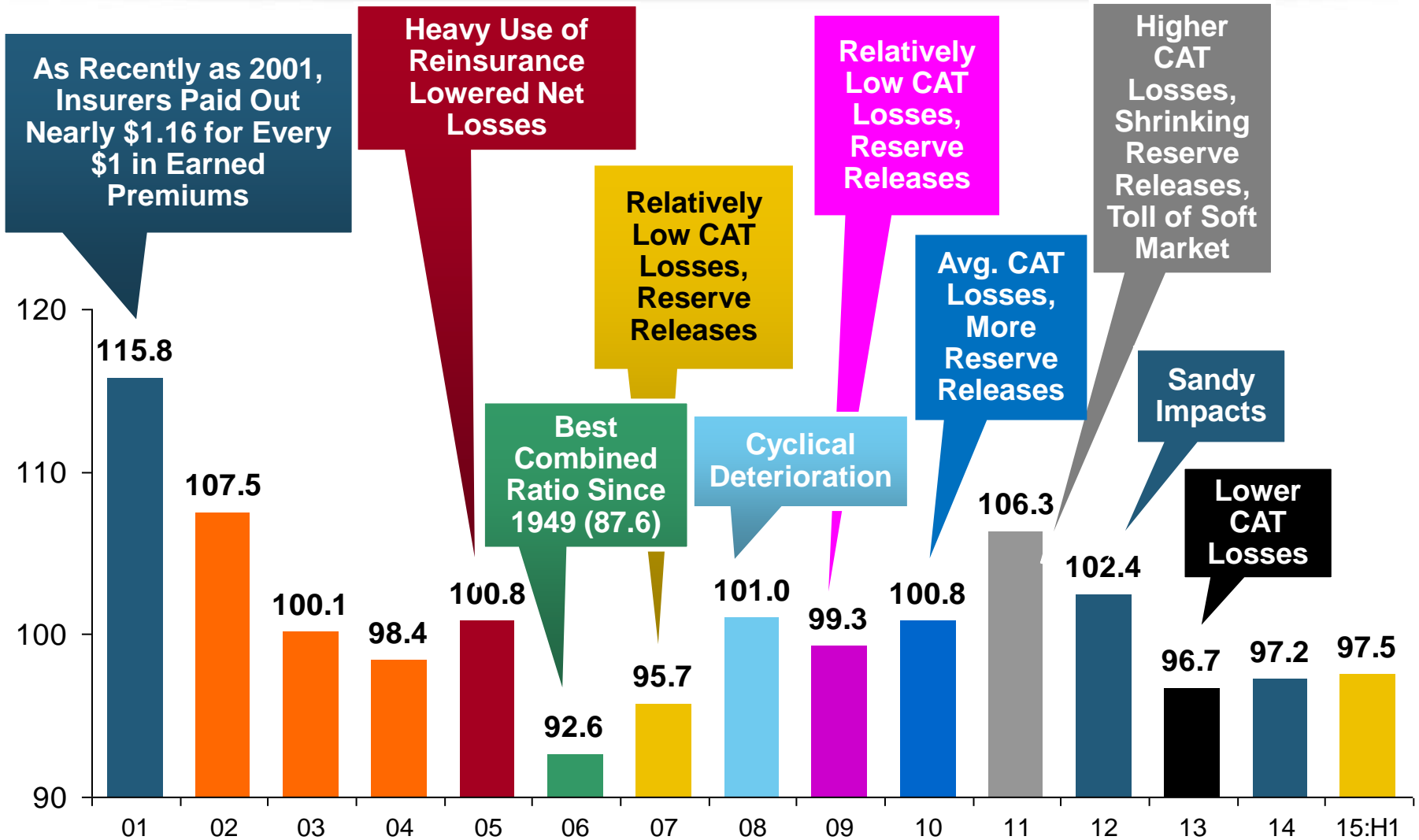
# ROE: Property/Casualty Insurance by Major Event, 1987–2015E

(Percent)



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

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



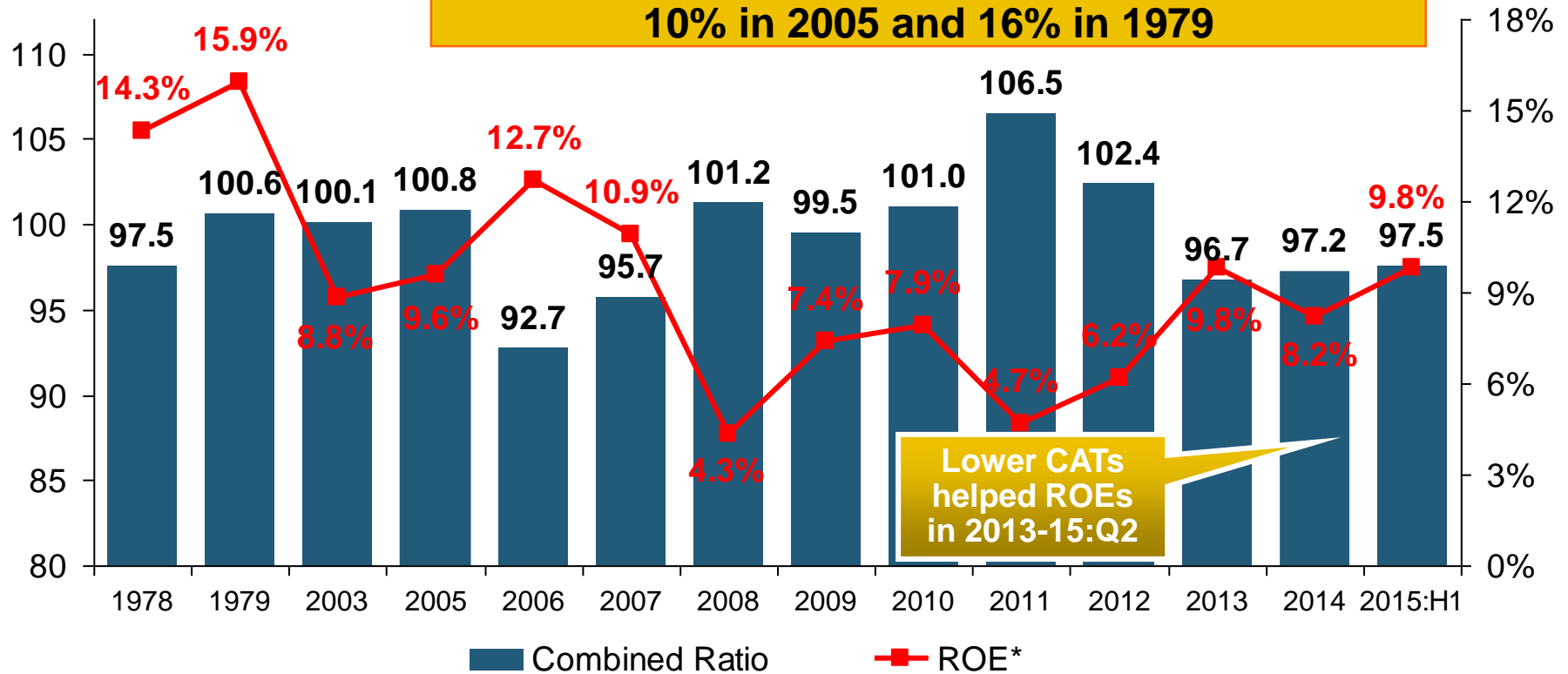
\* Excludes Mortgage & Financial Guaranty insurers 2008--2014. Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2; 2013: = 96.1; 2014: = 97.0.

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

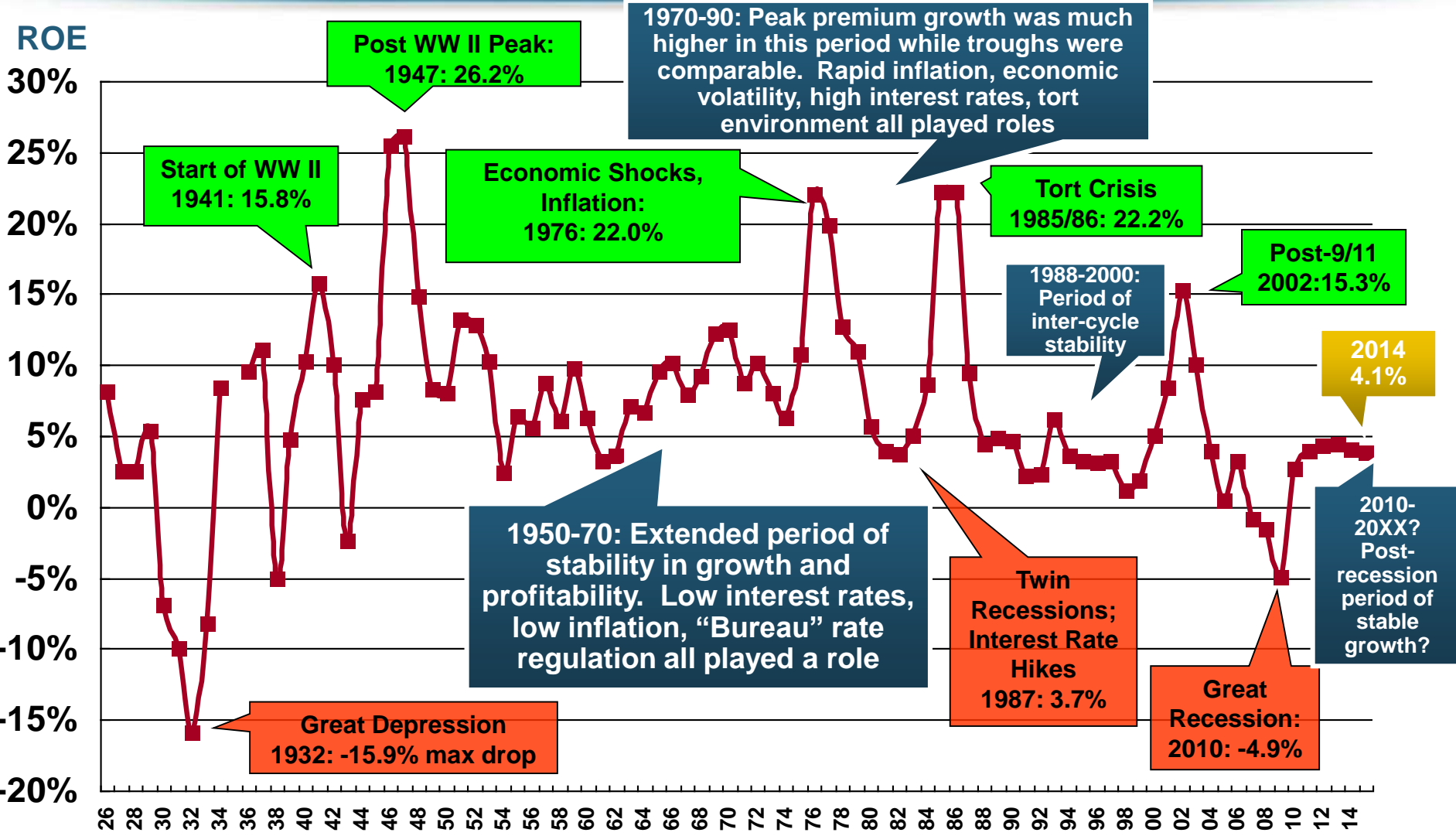


**Combined Ratios Must Be Lower in Today's Depressed Investment Environment to Generate Risk Appropriate ROEs**

\* 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.

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



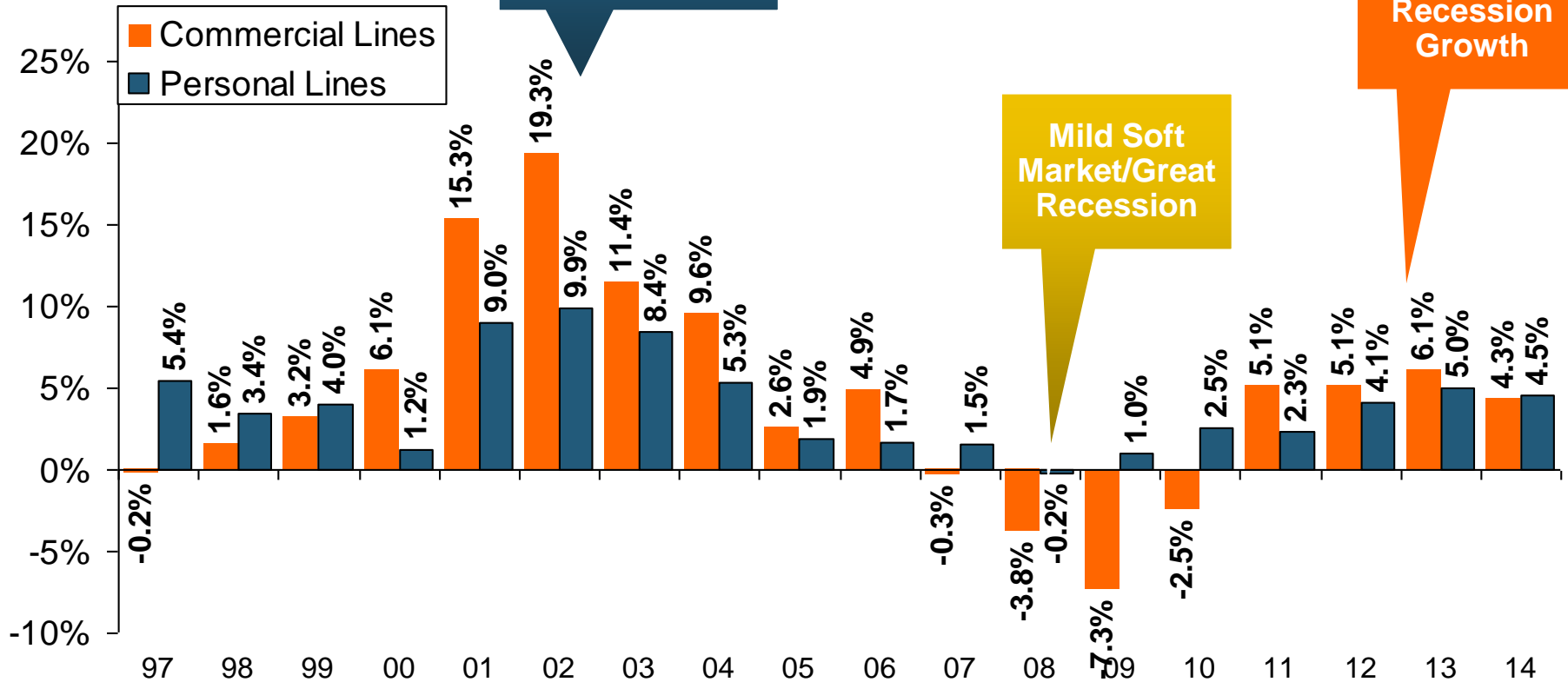
Note: Data through 1934 are based on stock companies only. Data include state funds beginning in 1998.

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



# Direct Premiums Written Growth, 1997–2014

DPW (% chg from prior year)

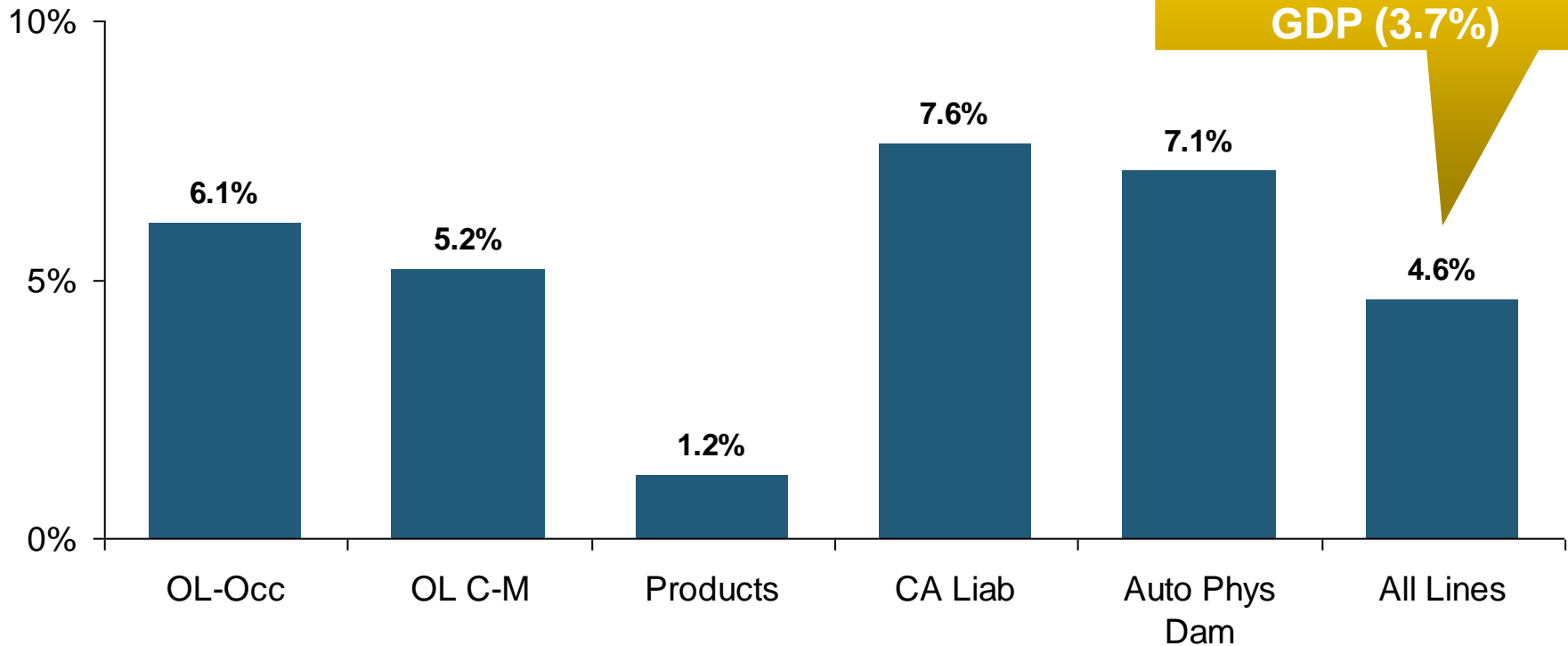


**Personal and Commercial Lines Both Have Pricing Cycle; Commercial Lines is More Pronounced.**

Sources: SNL Financial, Insurance Information Institute.

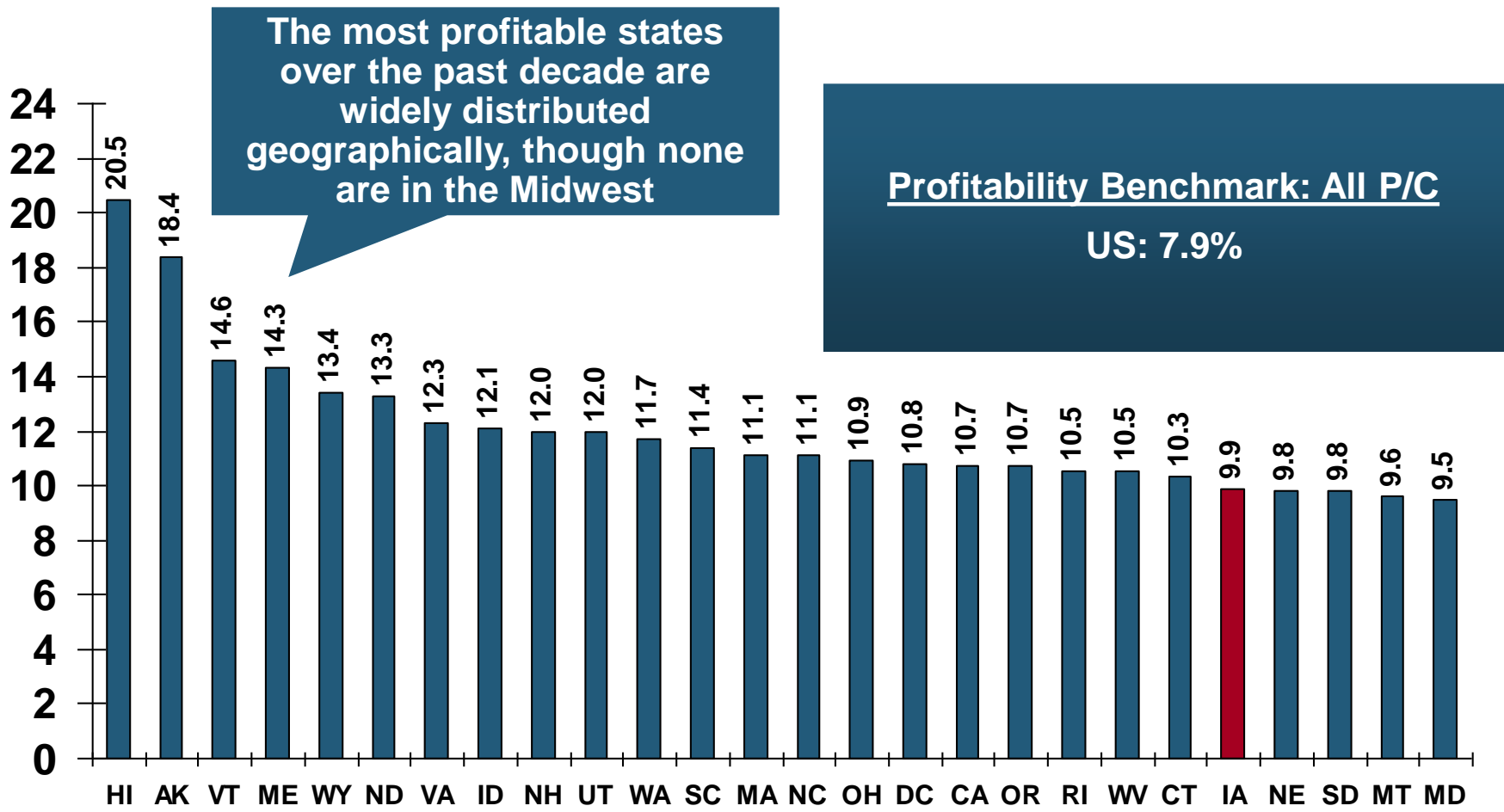
# Countrywide Growth by Line 2015 to Date

(% Change in DPW from Q2 2014)



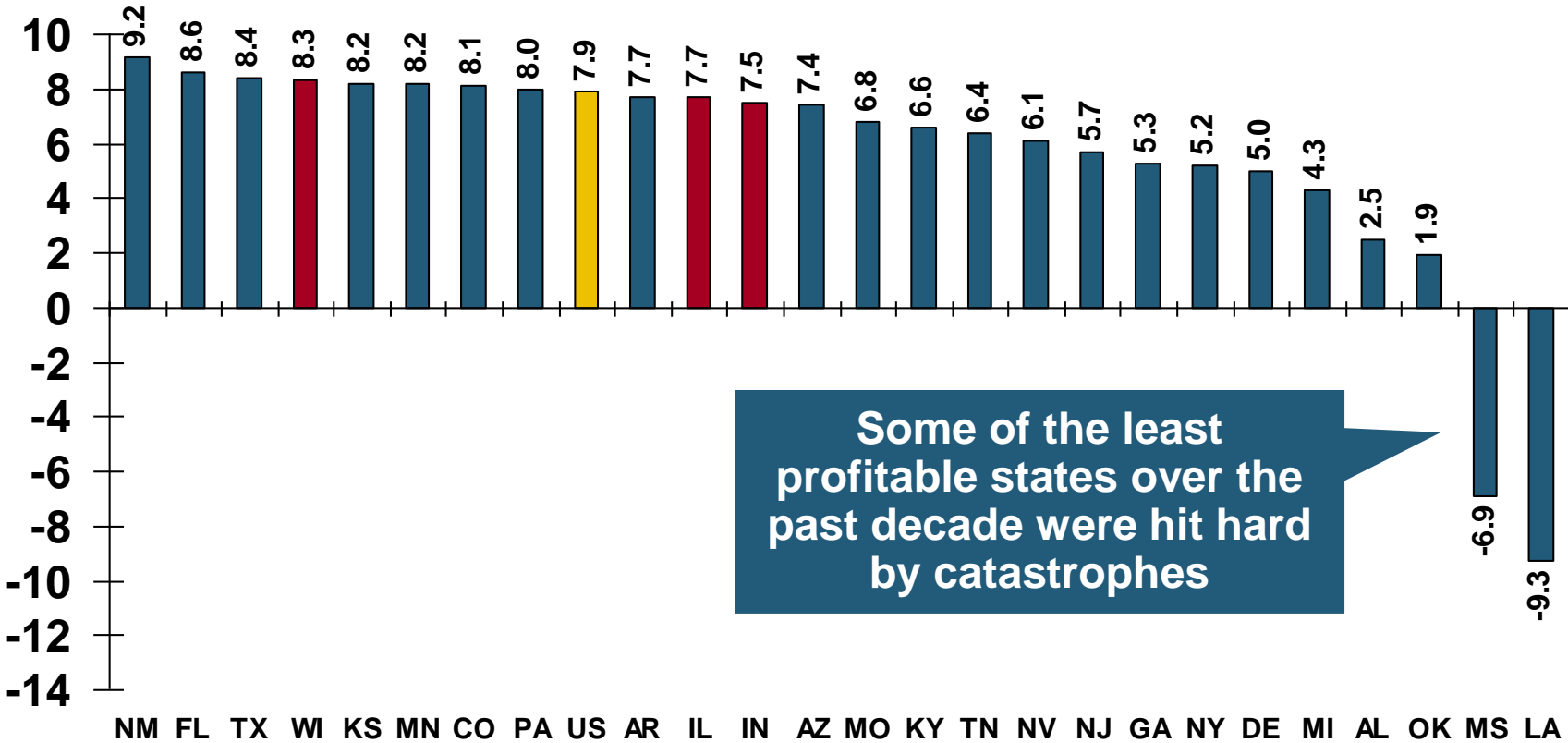
**Auto Coverages Showing Strong Growth as Exposures – and Perhaps Rates - Are Increasing**

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



Source: NAIC; Insurance Information Institute.

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



Source: NAIC; Insurance Information Institute.



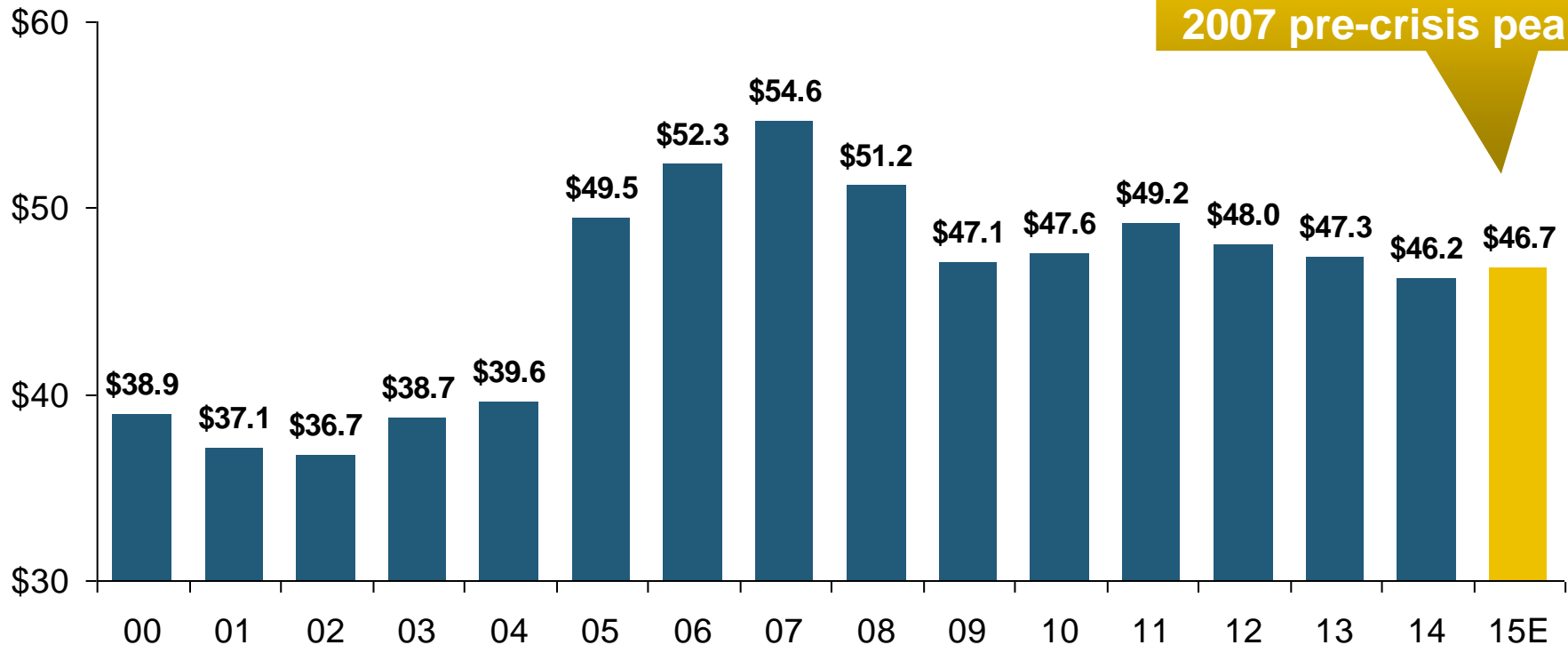
# INVESTMENTS: THE NEW REALITY

**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)



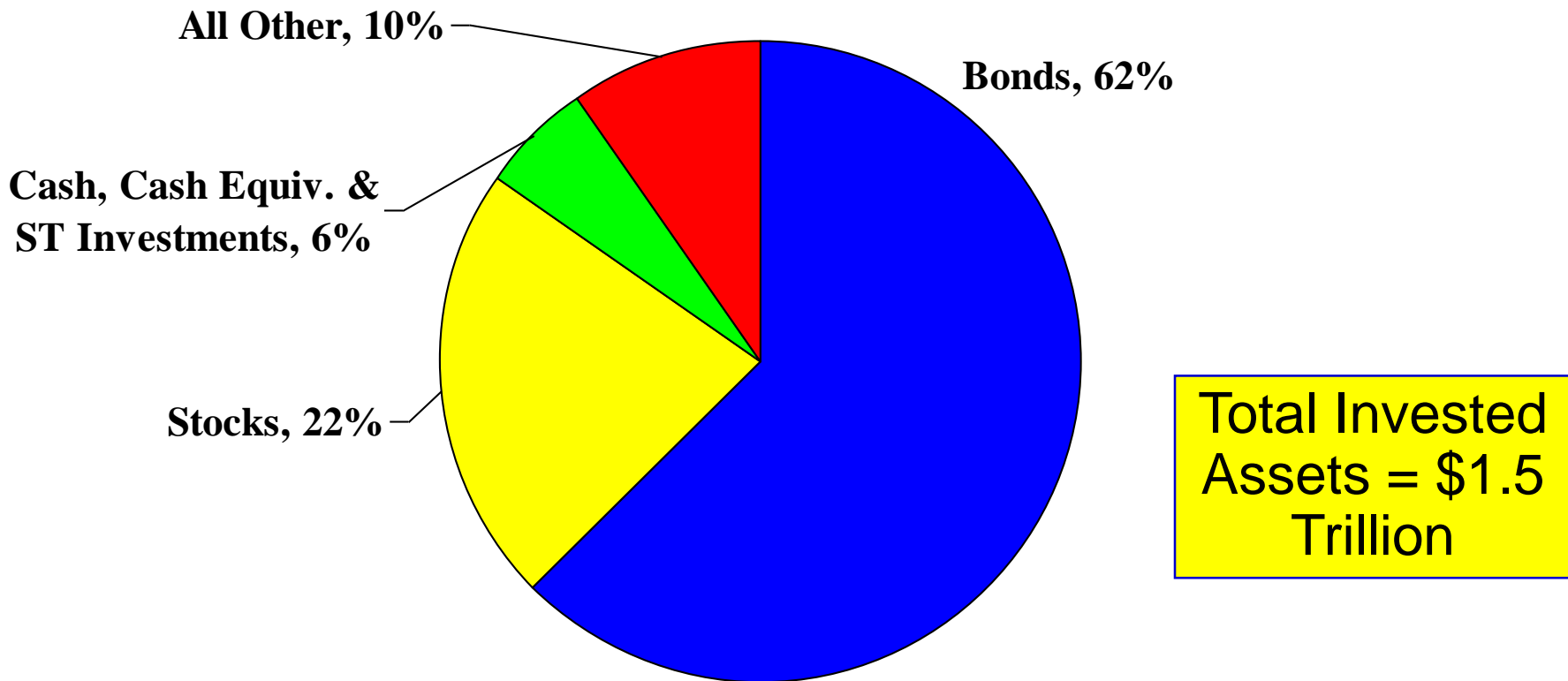
**Due to persistently low interest rates,  
investment income fell in 2012, 2013 and 2014.**

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

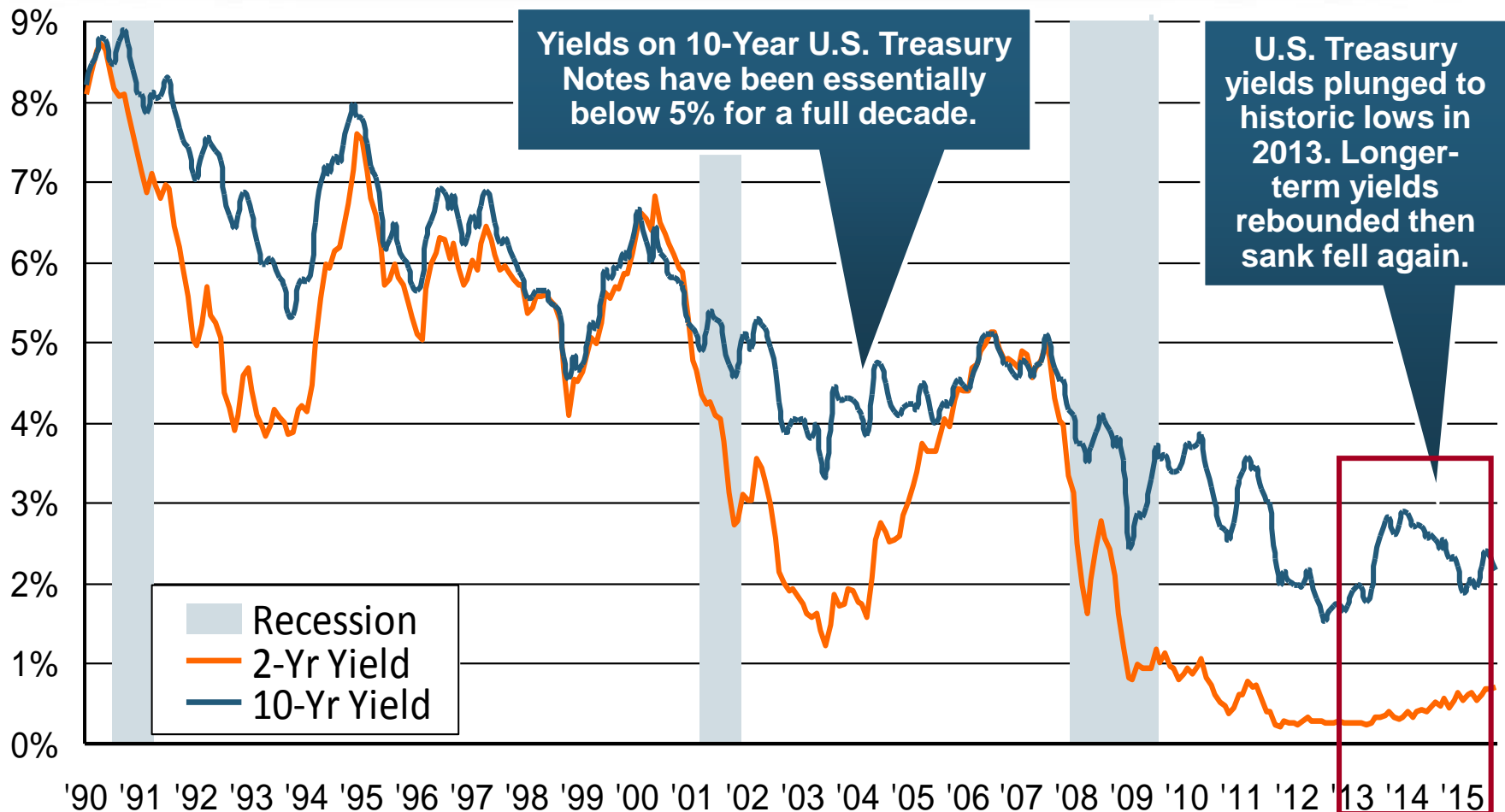
\*2015 figure is estimated based on annualized data through Q1.

# 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.**

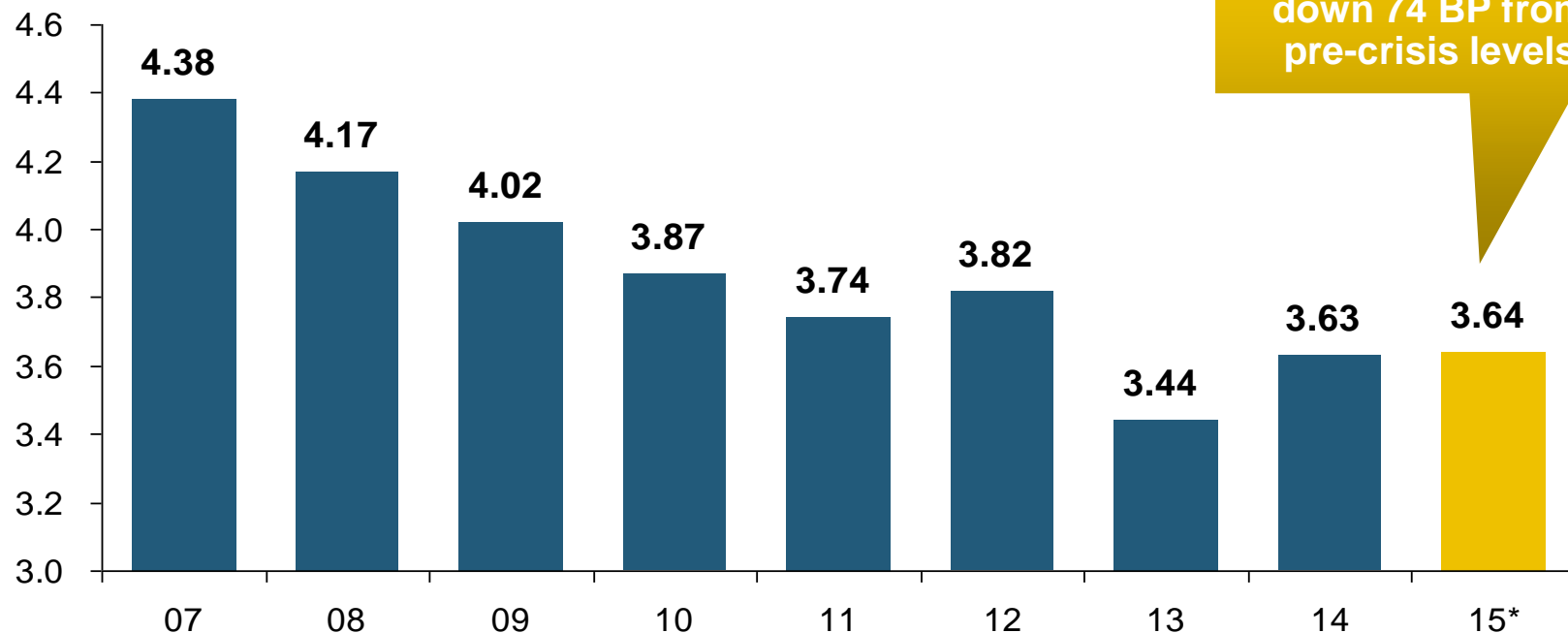
\*Monthly, constant maturity, nominal rates, through August 2015.

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



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

(Percent)



The yield on invested assets remains low relative to pre-crisis yields. The Fed's decision to hold interest rates steady has depressed yields more.

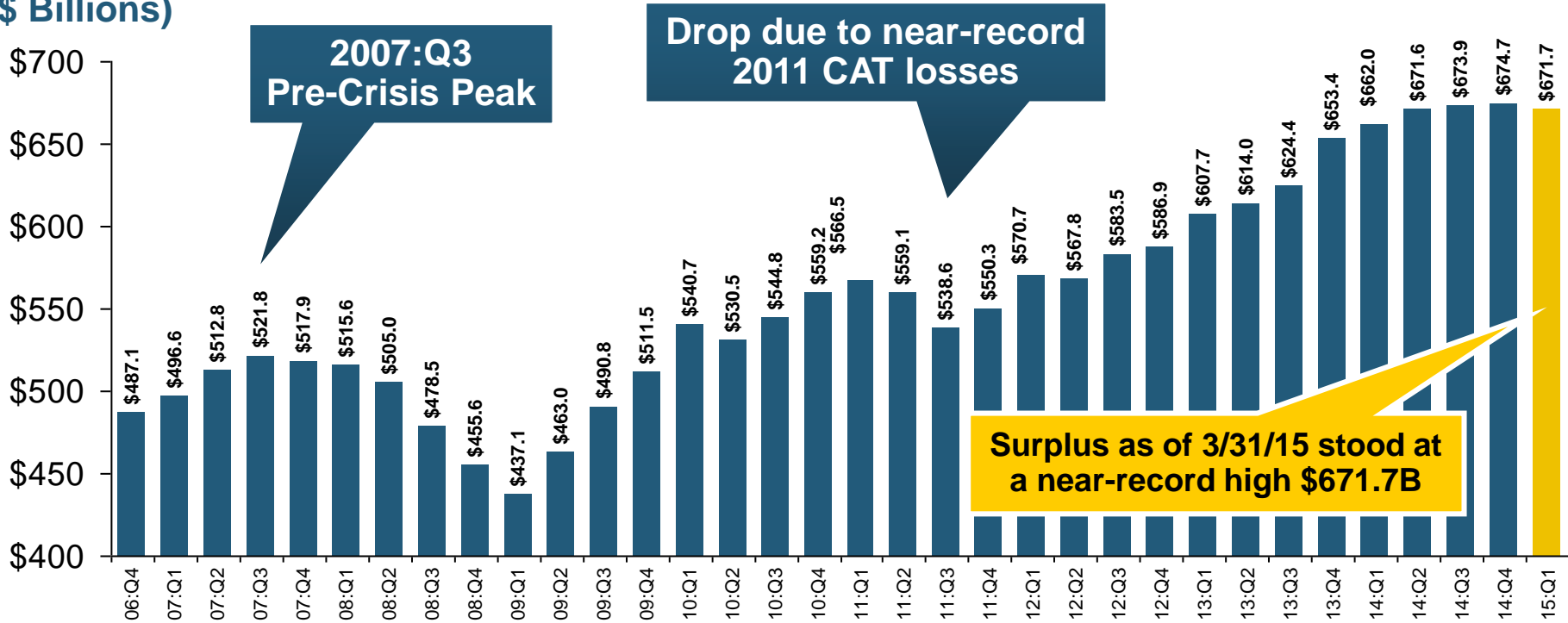


# CAPITAL/CAPACITY

## Capital Accumulation Has Multiple Impacts

# Policyholder Surplus, 2006:Q4–2015:Q1

(\$ Billions)



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

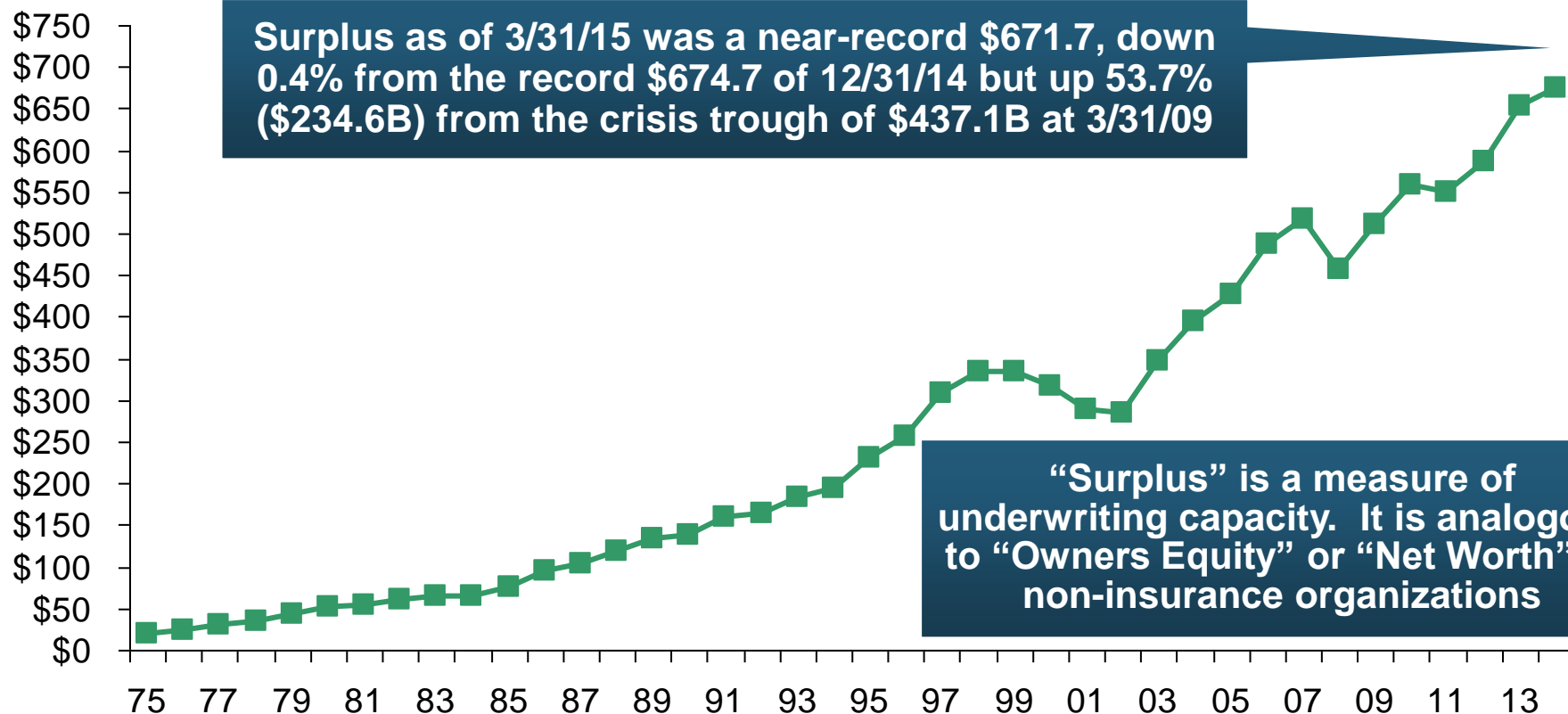
2010:Q1 data includes \$22.5B of paid-in capital from a holding company parent for one insurer's investment in a non-insurance business .

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

Sources: ISO, A.M .Best.

# US Policyholder Surplus: 1975–2015:Q1\*

(\$ Billions)



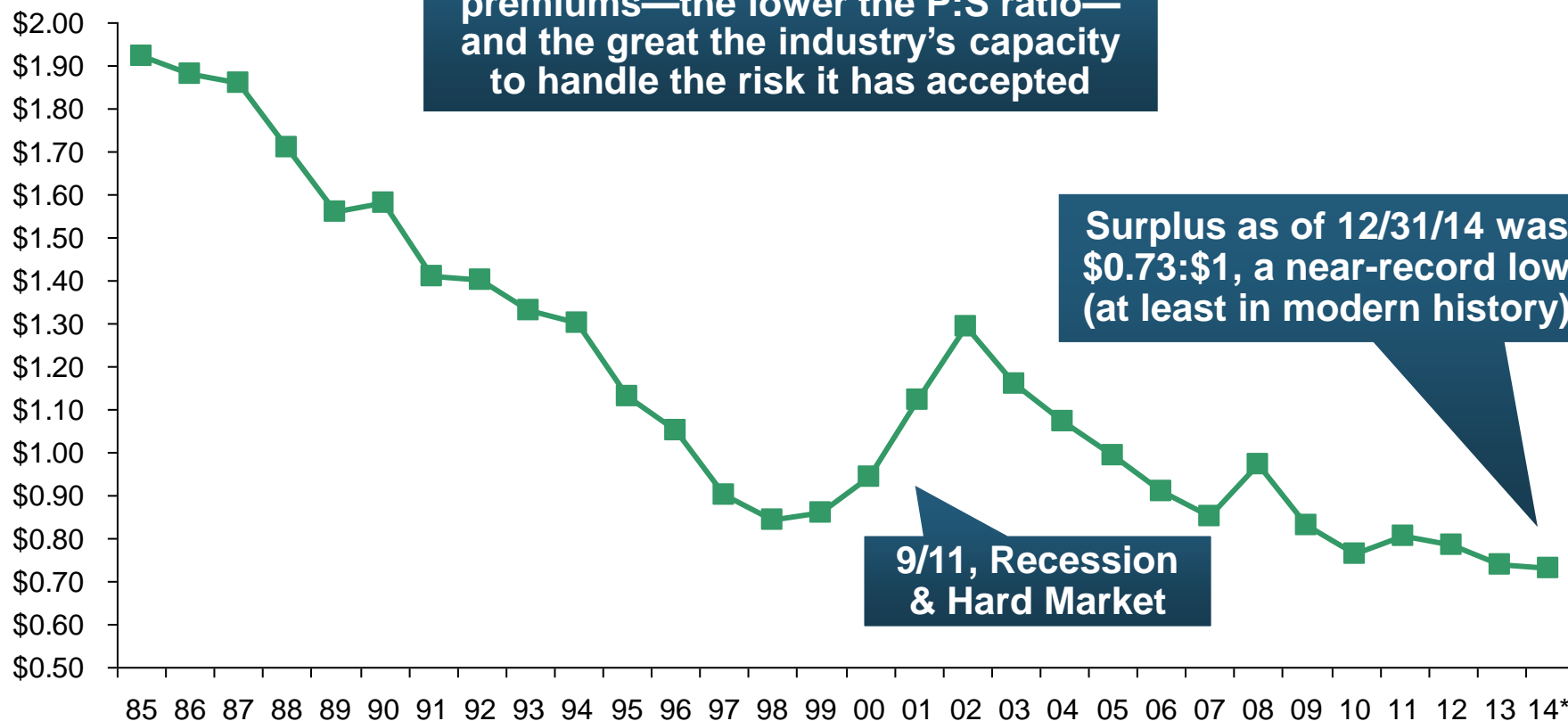
**The Premium-to-Surplus Ratio Stood at \$0.73:\$1 as of 3/31/15, a Near Record Low (at Least in Recent History)**

\* As of 3/31/15.

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

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

(Ratio of NWP to PHS)



**Low P/S Ratio Means Insurers Have Less Leverage to Drive ROE.**

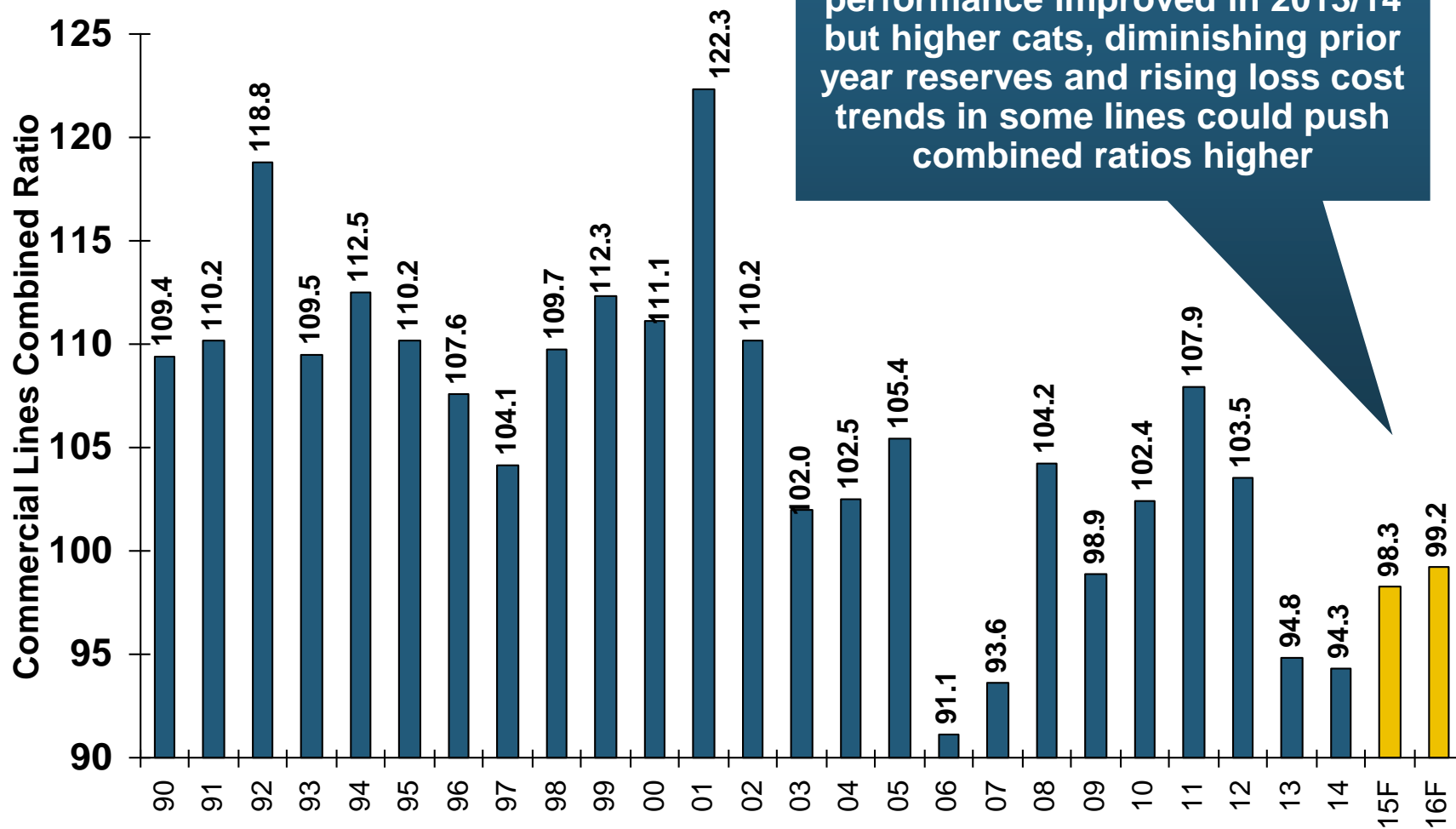
\* As of 12/31/14.

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



# Underwriting Performance

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

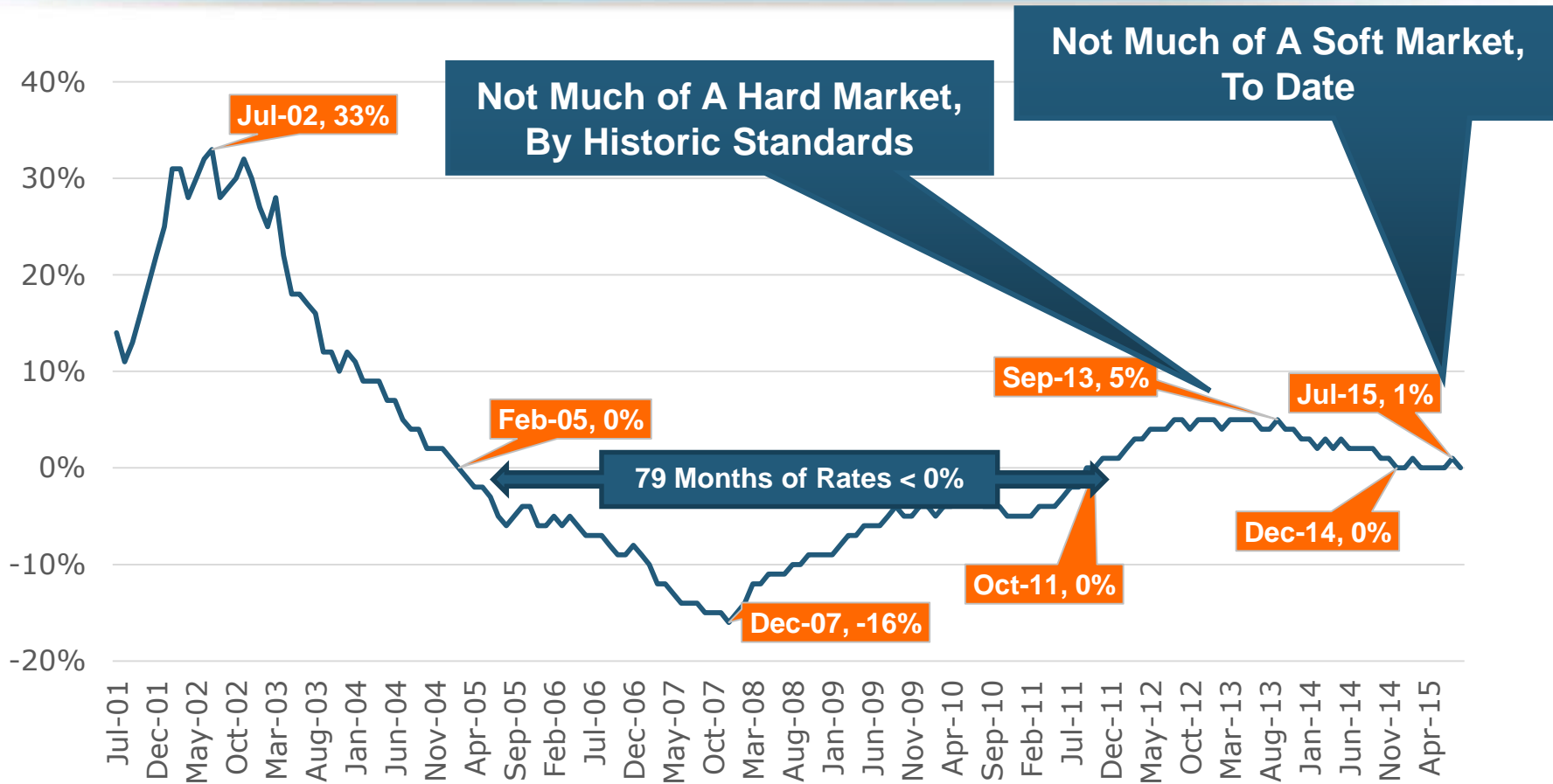


Commercial lines underwriting performance improved in 2013/14 but higher cats, diminishing prior year reserves and rising loss cost trends in some lines could push combined ratios higher

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

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

# Commercial Lines Rate Change by Month (vs. Year Earlier)



**Rates Are As Stable As They've Been in 15 Years, Though Individual Lines and Segments May Differ Greatly.**

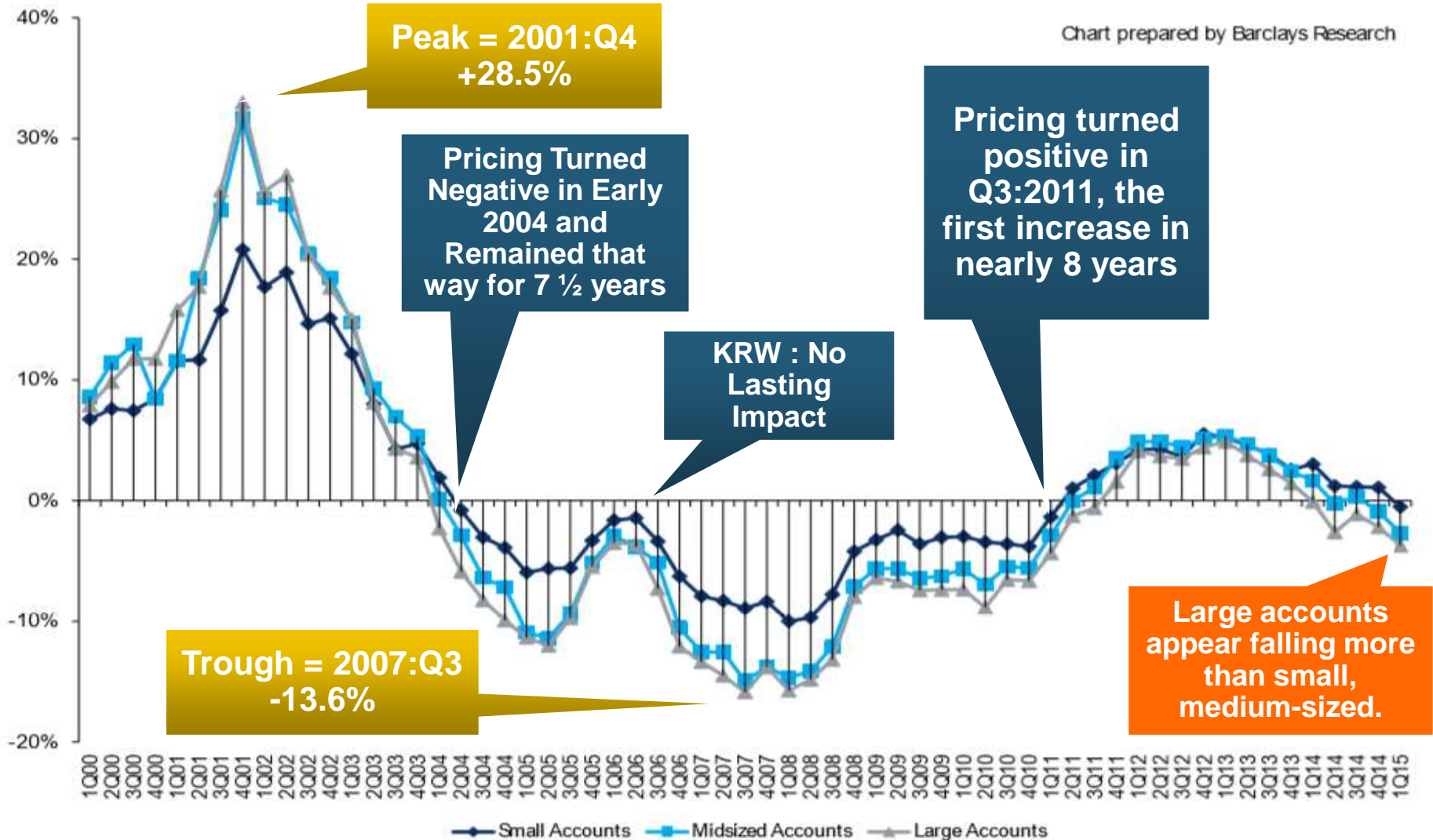
SOURCE: MarketScout, Insurance Information Institute.



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

Percentage Change (%)

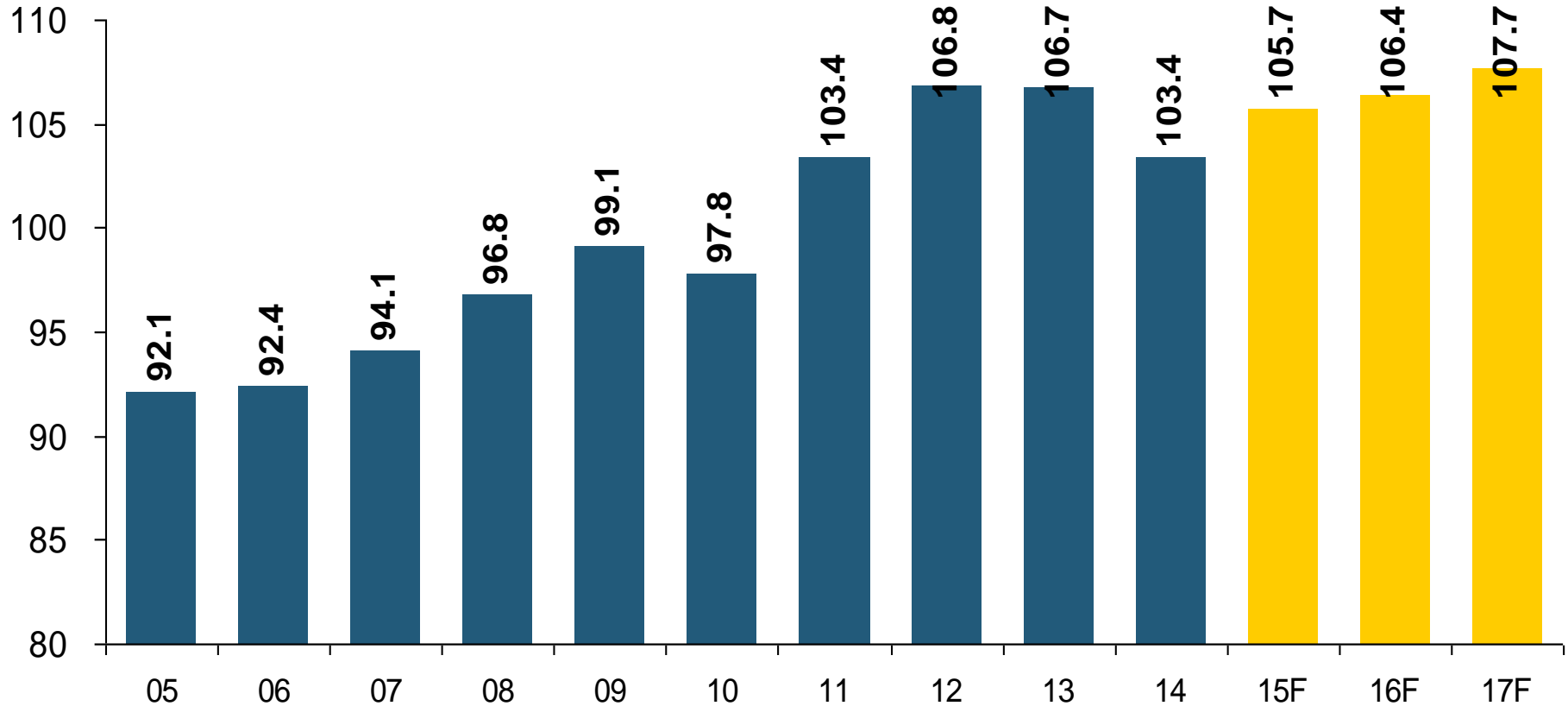
Chart prepared by Barclays Research



Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, *potentially substantially*.

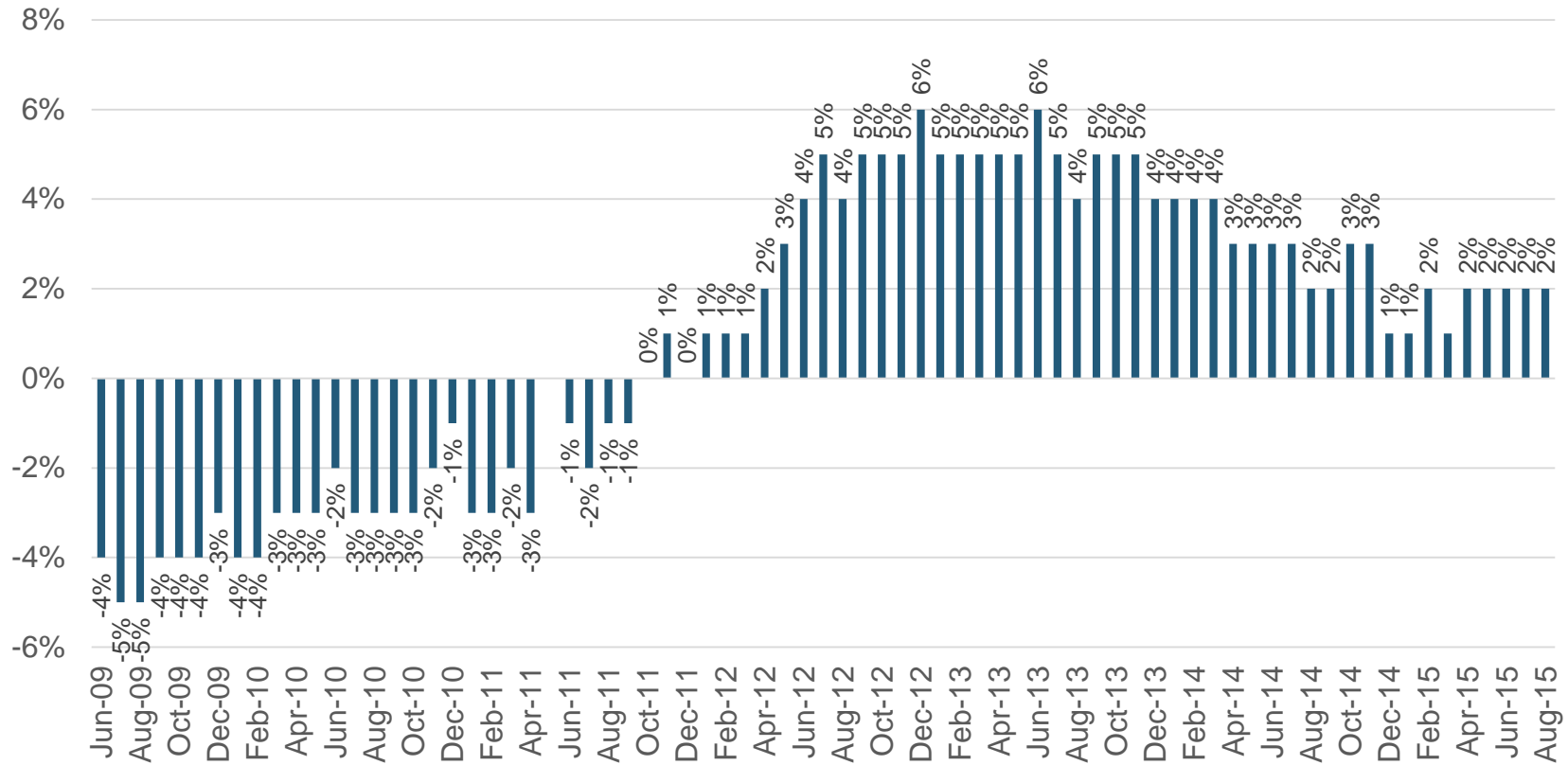
Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

# Commercial Auto Combined Ratio: 2005–2017F



**Legacy of Low Rates, Under-reserving Will Hurt Results for a Few More Years.**

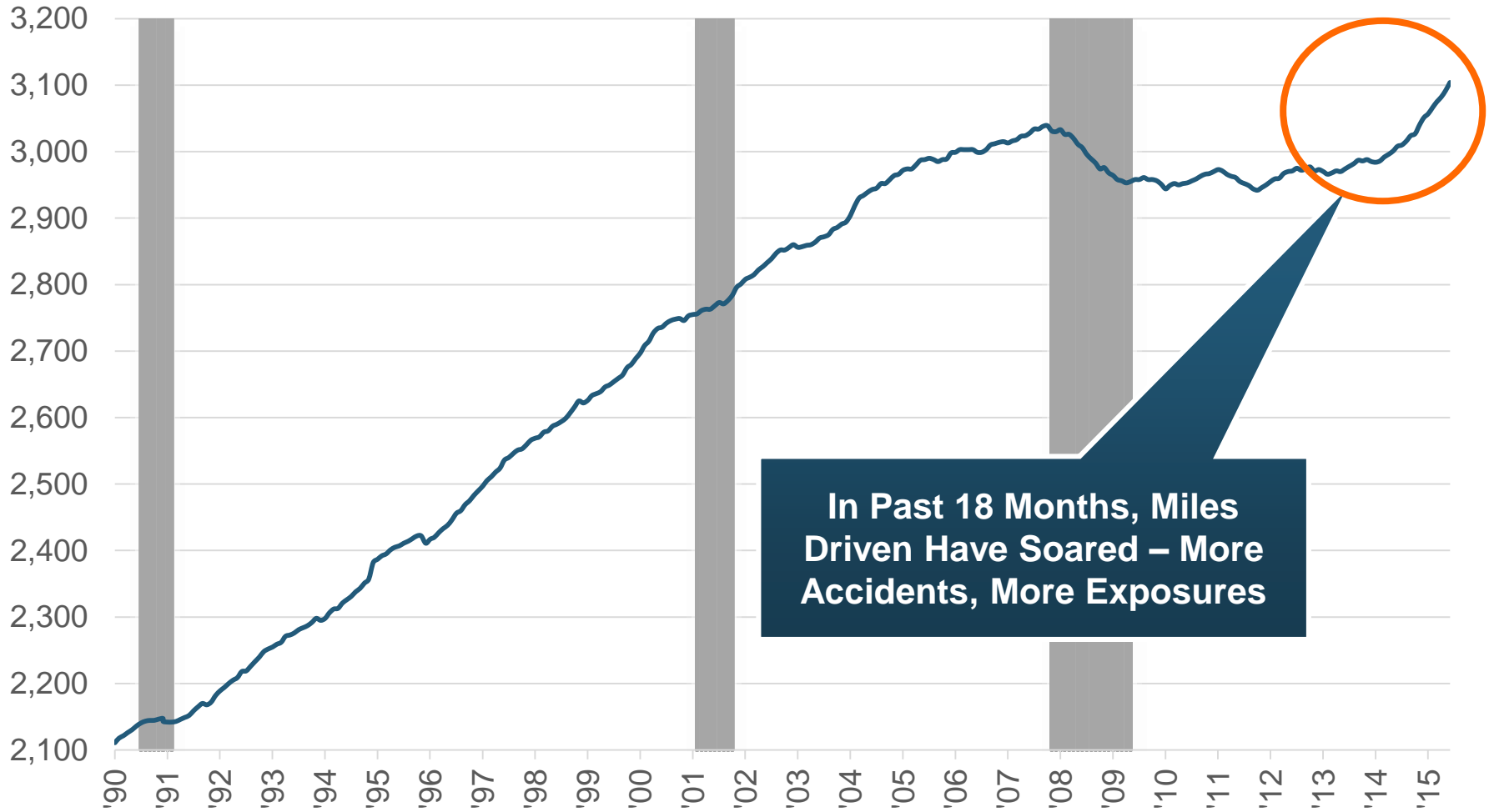
# Commercial Auto Rate Change by Month (vs. Year Earlier)



**Rates Rising in Commercial Auto but Might Not Be Enough to Offset Loss Trend, Increase in Frequency.**

# Miles Driven is Climbing

Billions of Miles



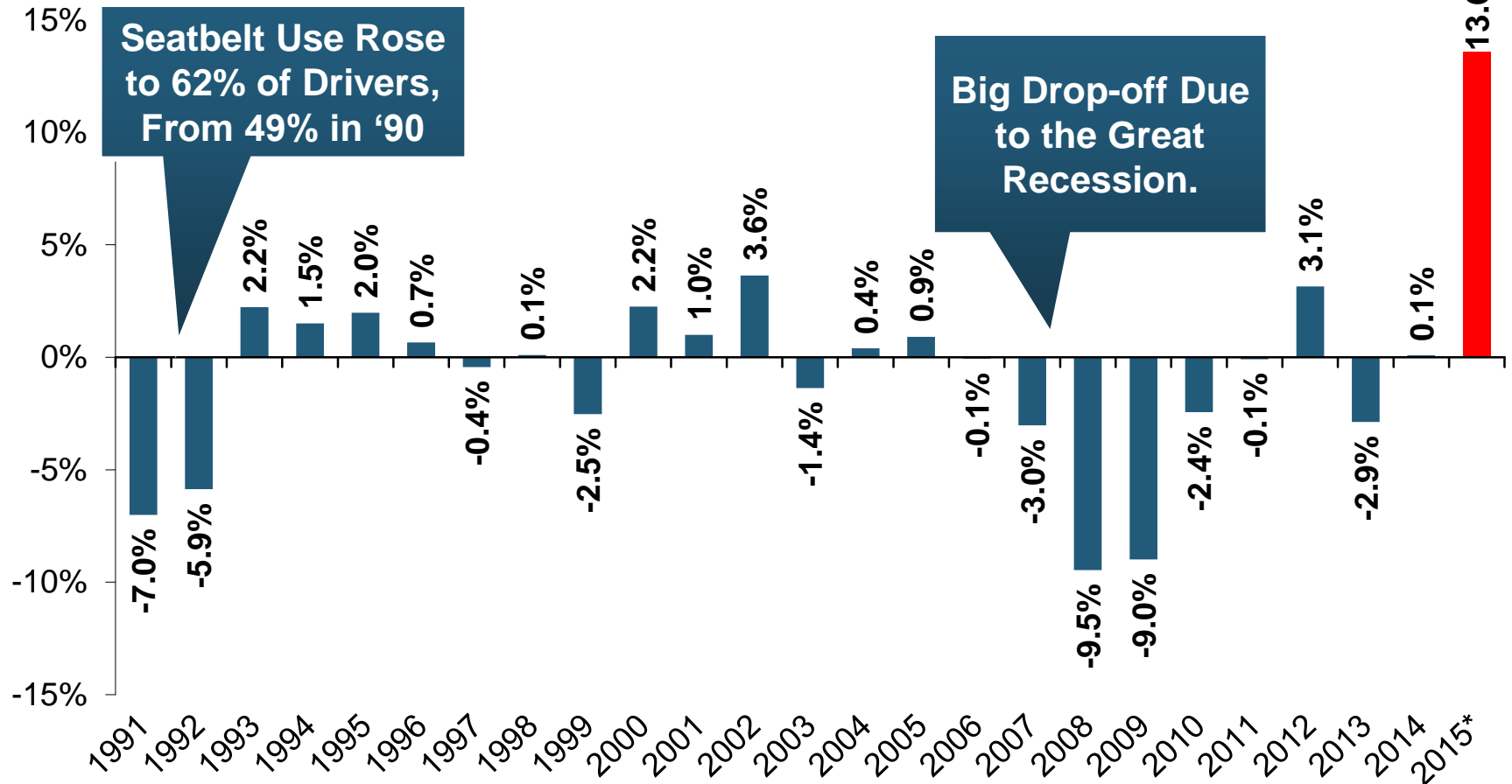
\*Moving 12-month total. Data through July 2015.

Note: Recessions indicated by gray shaded columns.

Sources: Federal Highway Administration ([http://www.fhwa.dot.gov/policyinformation/travel\\_monitoring/tvt.cfm](http://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm)); National Bureau of Economic Research (recession dates); Insurance Information Institute.

# Driving Fatalities Are Rising

## Annual Change in Motor Vehicle Deaths

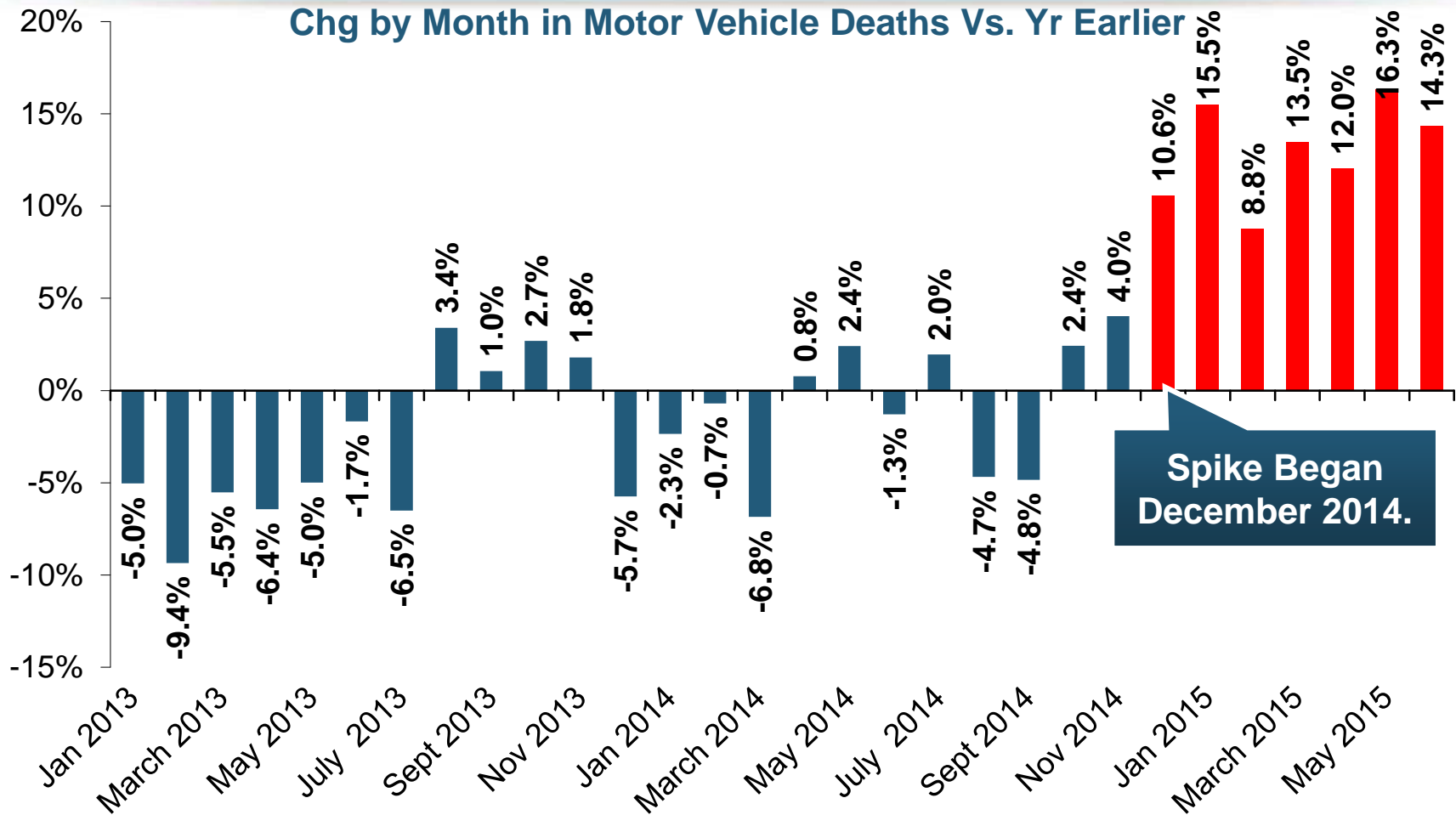


**Driving Has Been Getting Safer For Decades, But Recent Trend Is Discouraging.**

\* Through June 2015.

Sources: National Safety Council, Insurance Information Institute.

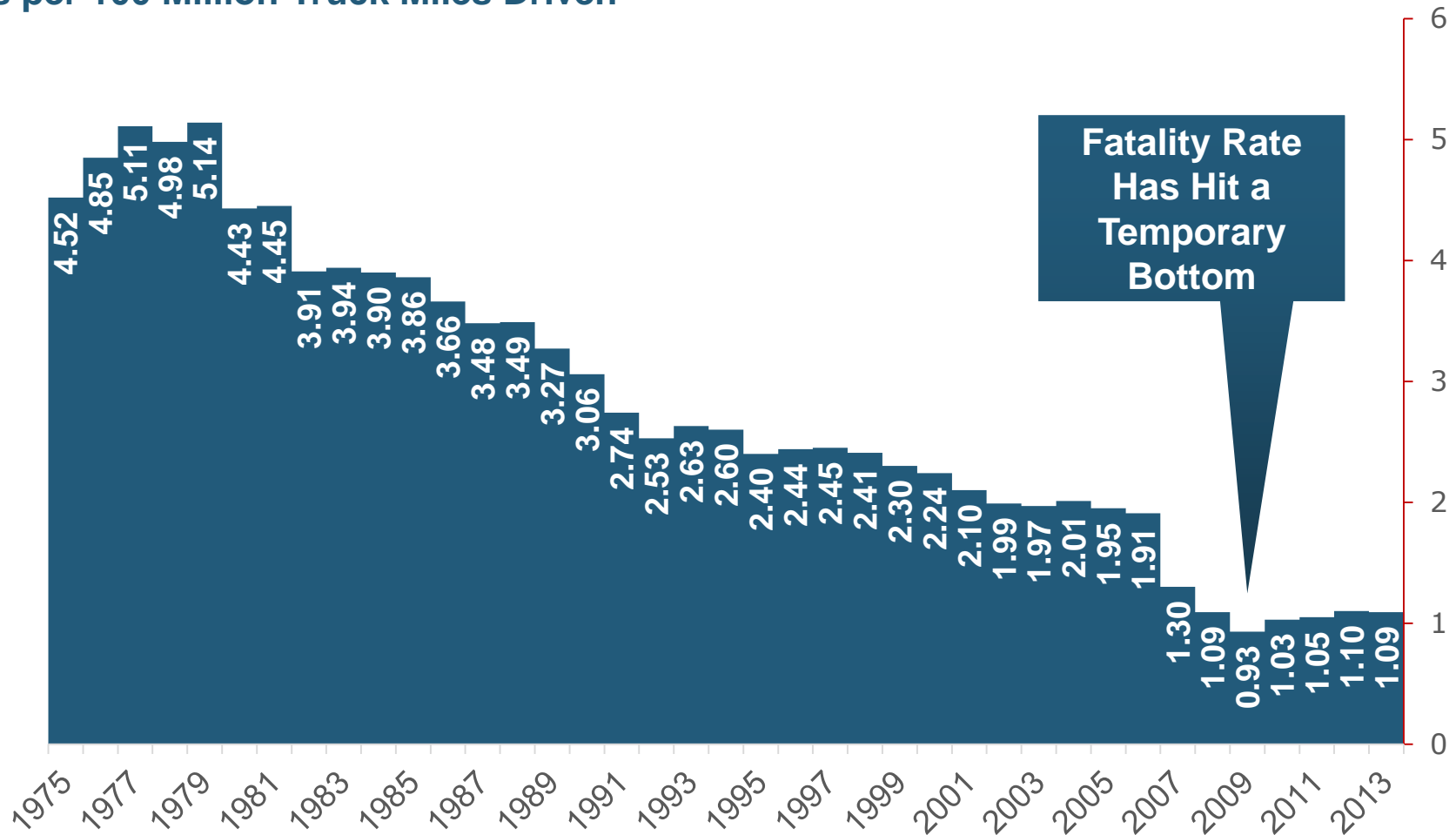
# Driving Fatalities Are Rising



**On Track for Most Auto Fatalities Since 2007.**

# Truck Safety – Long-Term Trends

## Deaths per 100 Million Truck Miles Driven

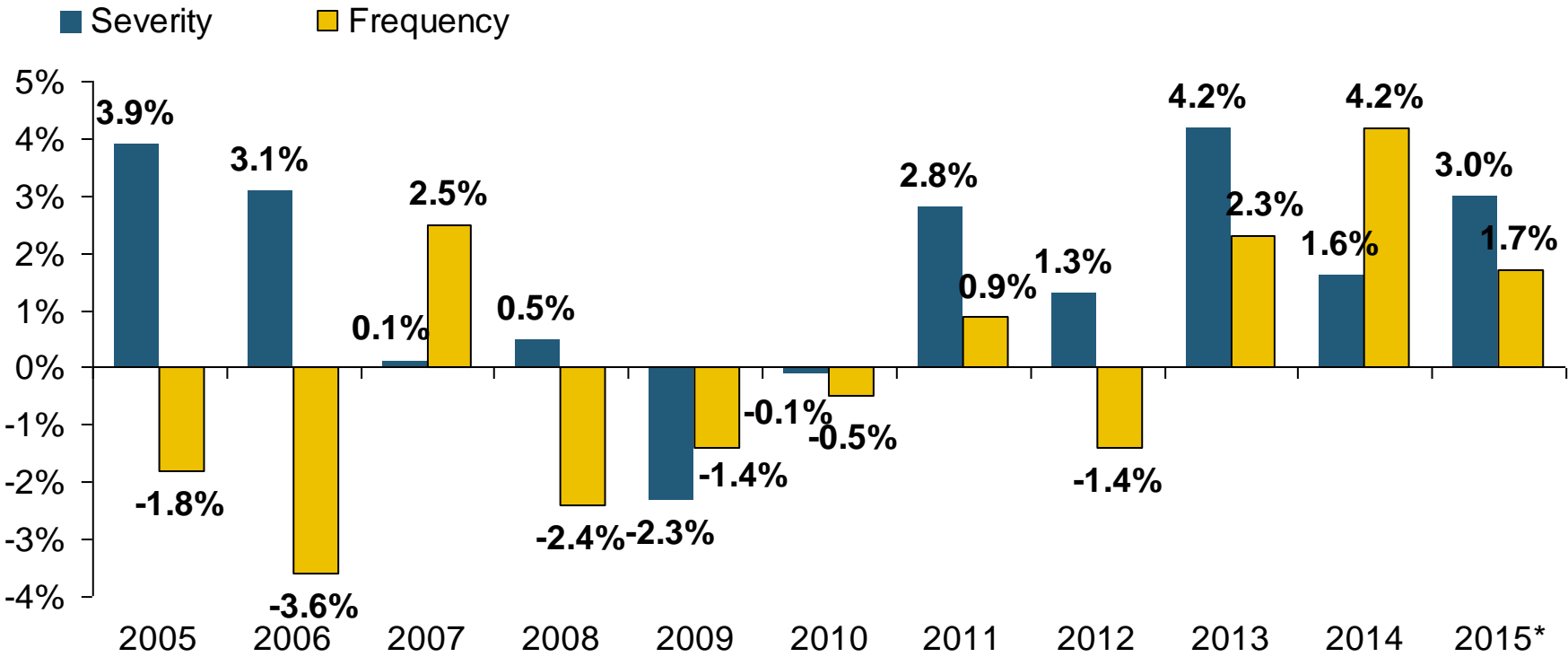


Occupants of large trucks and passenger vehicles combined.

Sources: Insurance Institute for Highway Safety/Highway Loss Data Institute; Insurance Information Institute.

# Personal Auto Collision Coverage: Severity & Frequency Are Both Rising

Annual Change, 2005 through 2015\*



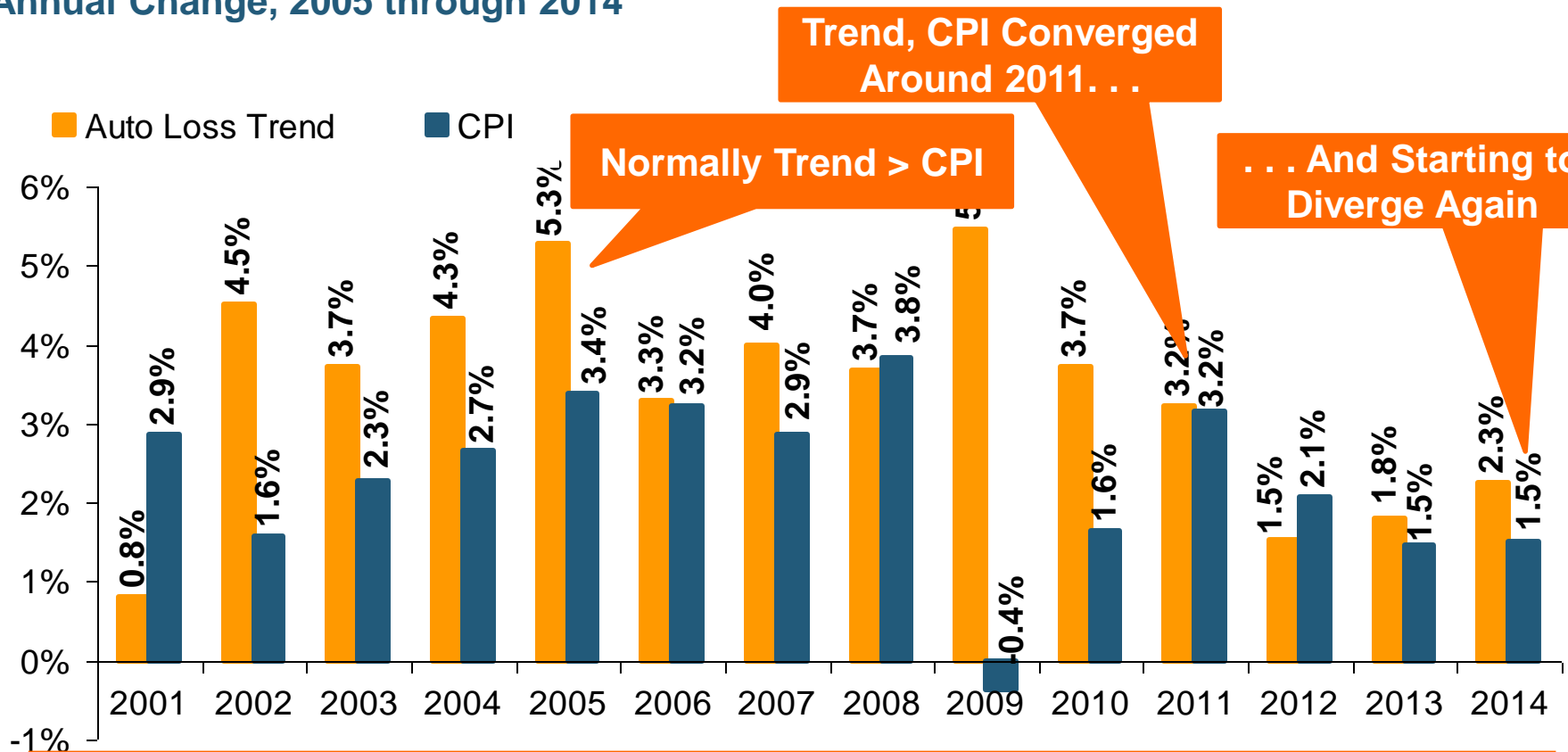
**The Same Appears to Be Happening in Commercial Auto**

\*2015 figure is for the 4 quarters ending with 2015:Q1.  
 Source: ISO/PCI *Fast Track* data; Insurance Information Institute.



# Auto: Loss Trend vs. Inflation

Annual Change, 2005 through 2014



Normally Trend > CPI

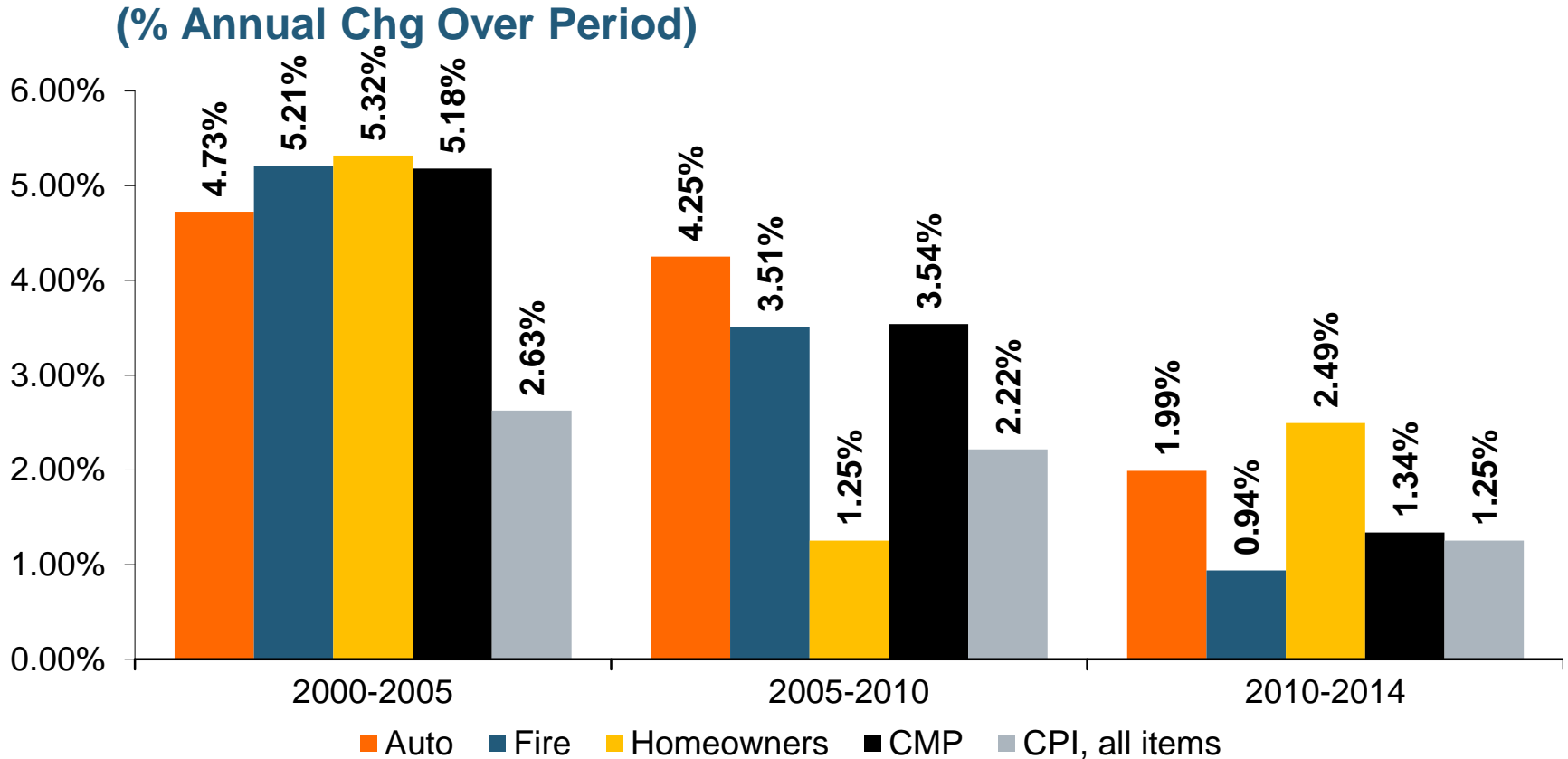
Trend, CPI Converged Around 2011...

... And Starting to Diverge Again

**If Loss Trends Return to the Norm, Upward Pressure Will Be Applied to Loss Costs.**

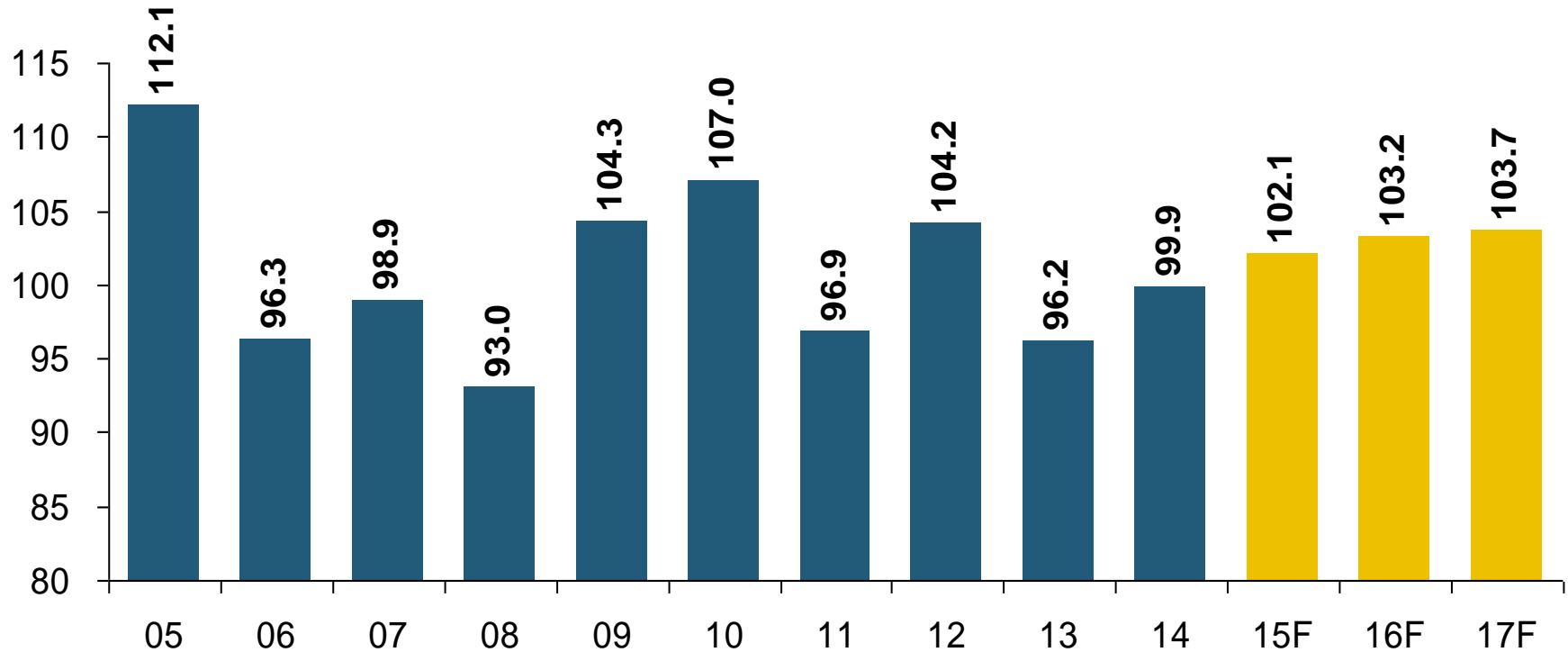
Source: Towers Watson Claim Cost Index, Insurance Information Institute.

# Claim Inflation vs. CPI



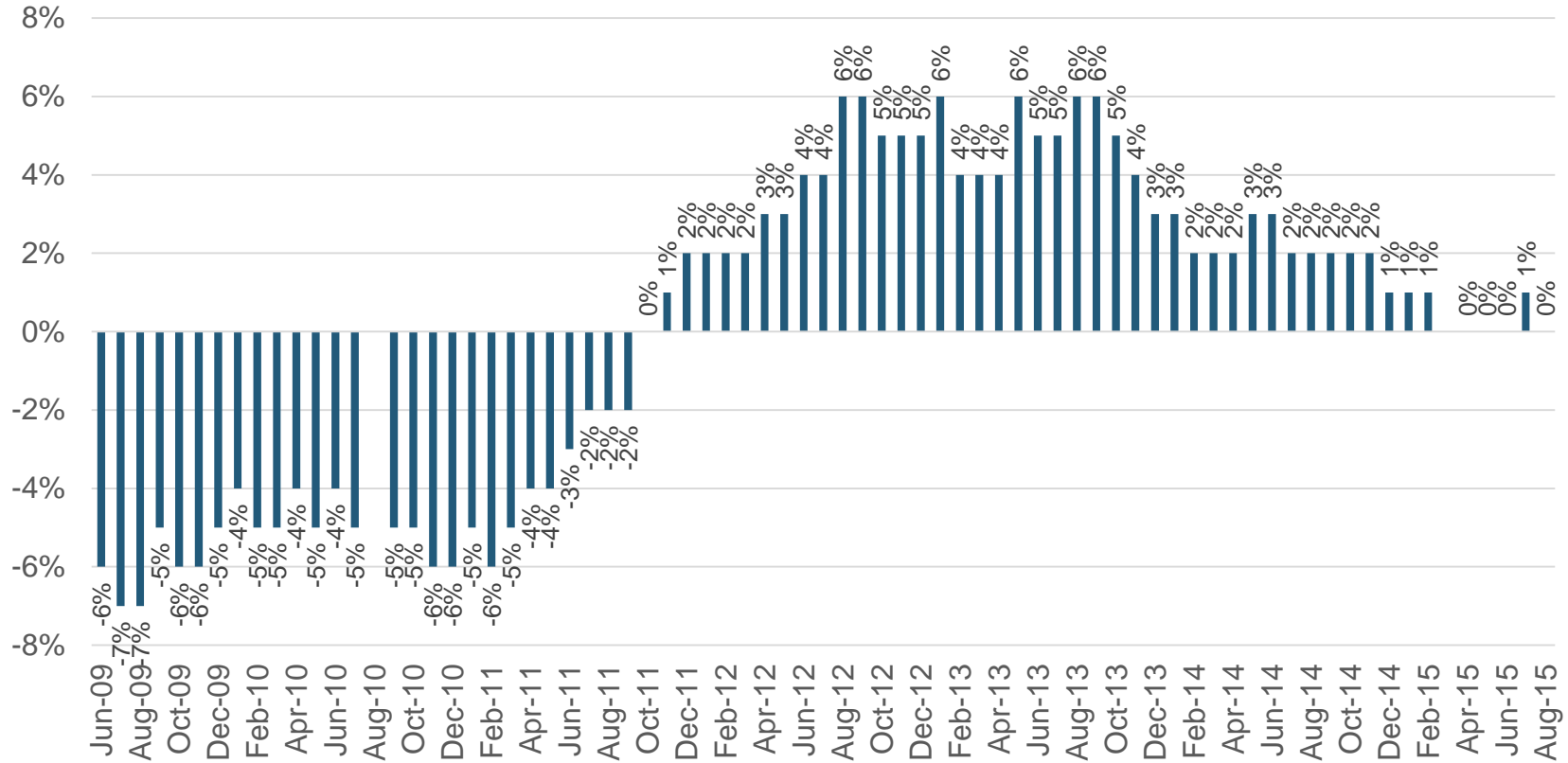
**In Recent Years, Claim Costs Have Risen at About the Inflation Rate. If We Return to the Norm, Claim Costs Will Rise.**

# General Liability Combined Ratio: 2005–2015F



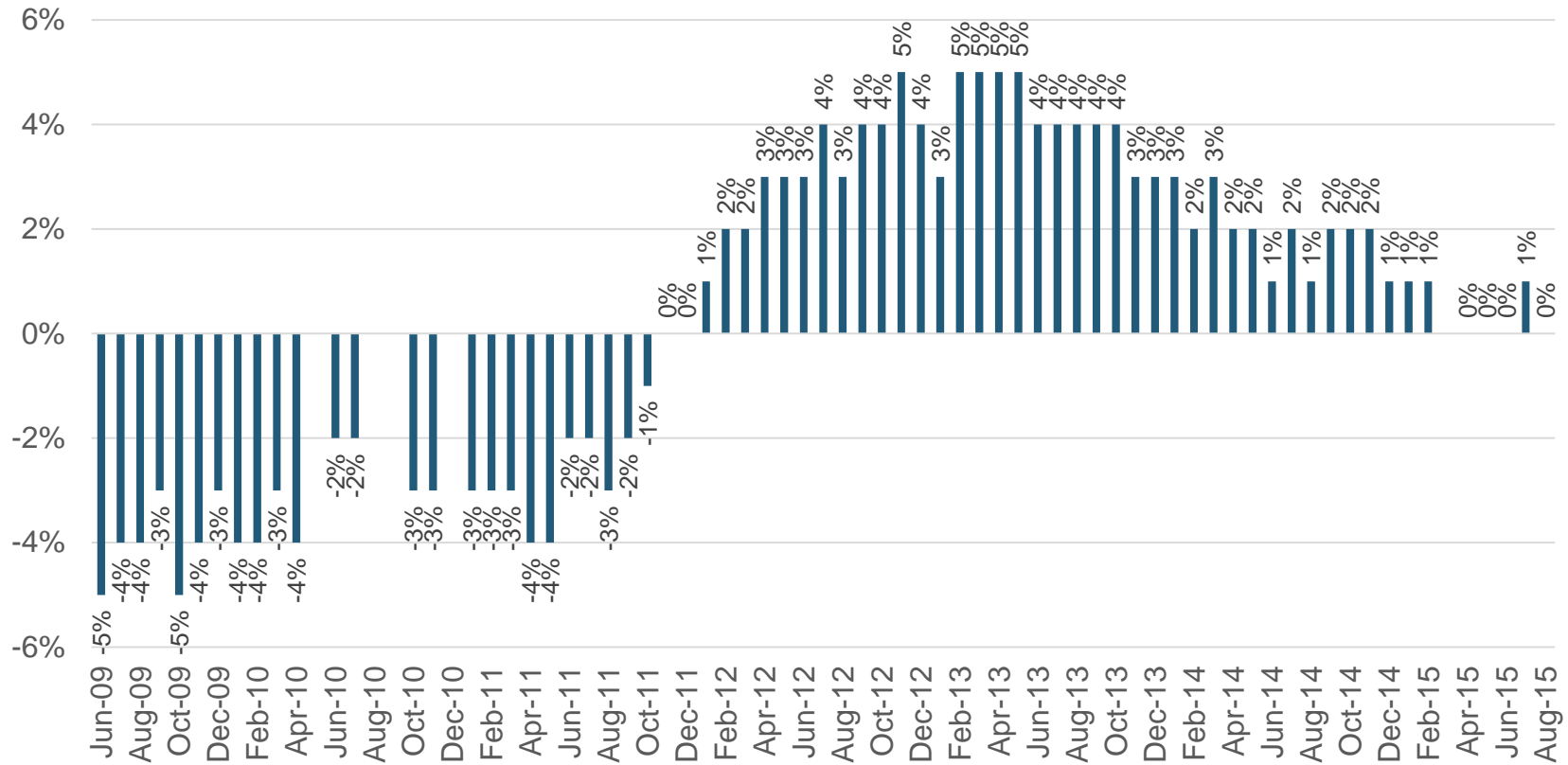
**Favorable Loss Trends May Stoke Competition**

# General Liability Rate Change by Month (vs. Year Earlier)



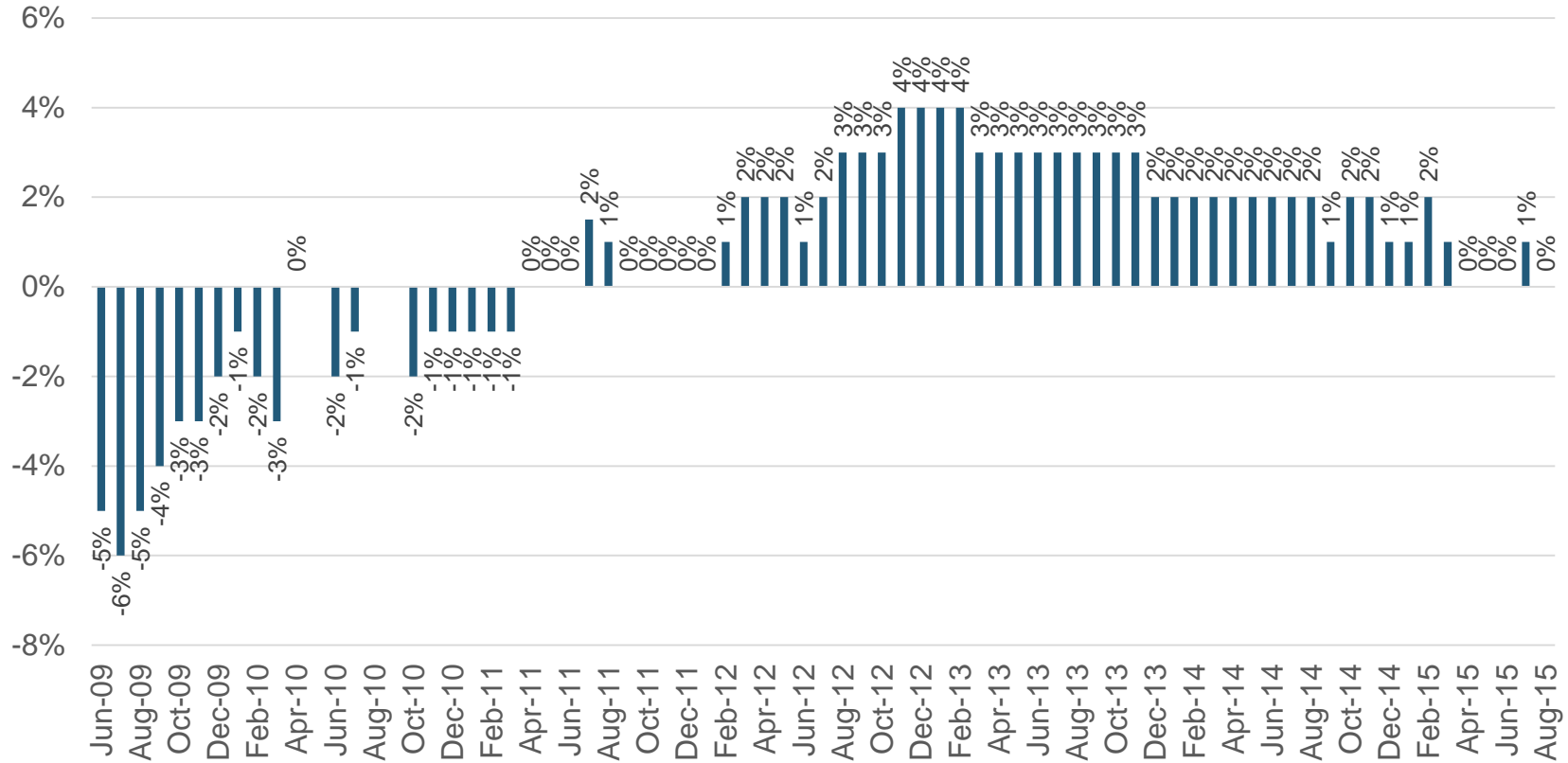
**Like Most Lines, Rates Have Been Flat Countrywide This Year.**

# Umbrella/Excess Rate Change by Month (vs. Year Earlier)



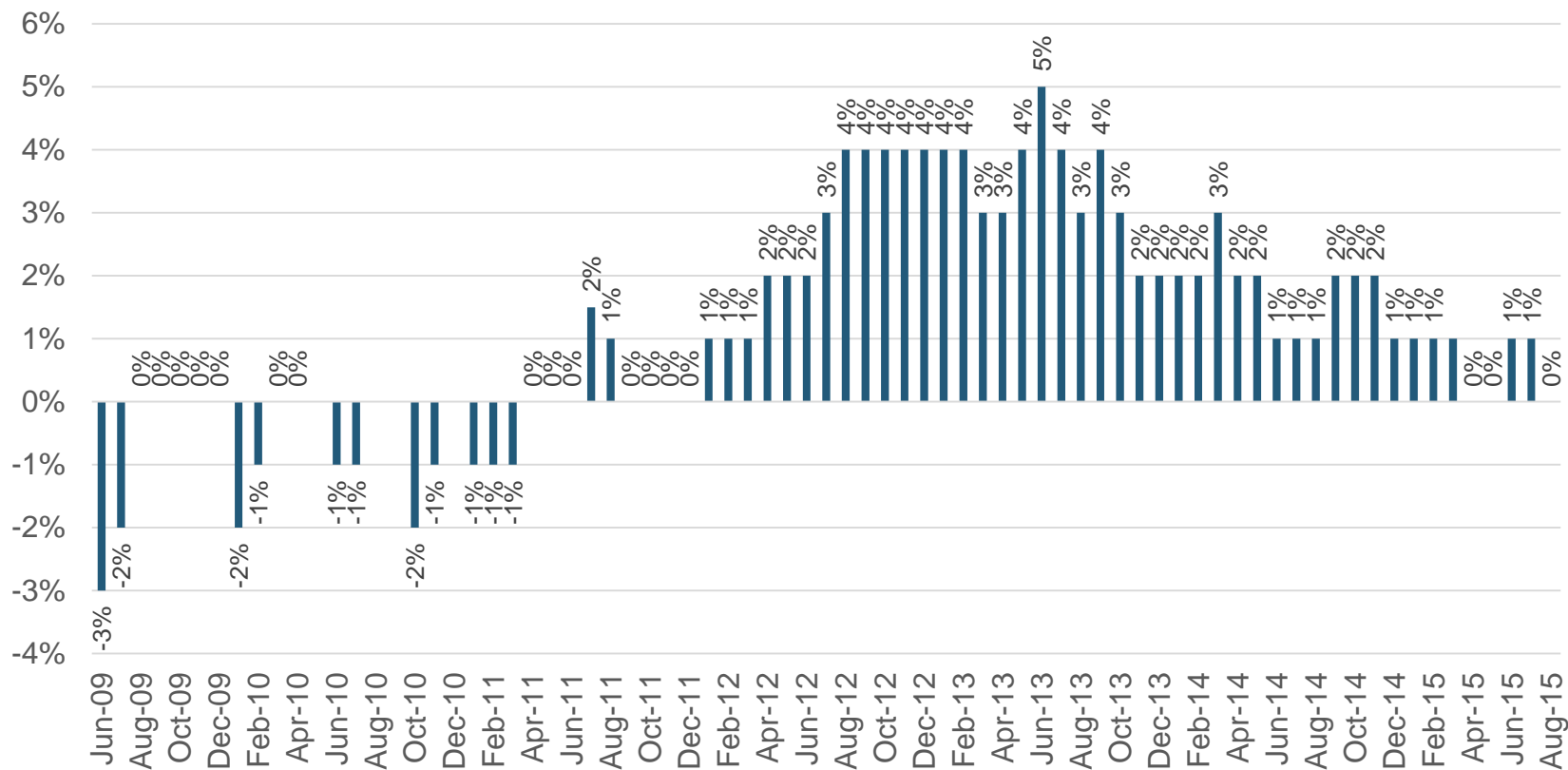
**Like Most Lines, Rates Have Been Flat Countrywide This Year.**

# Professional Liability Rate Change by Month (vs. Year Earlier)



**Like Most Lines, Rates Have Been Flat Countrywide This Year.**

# D&O Liability Rate Change by Month (vs. Year Earlier)

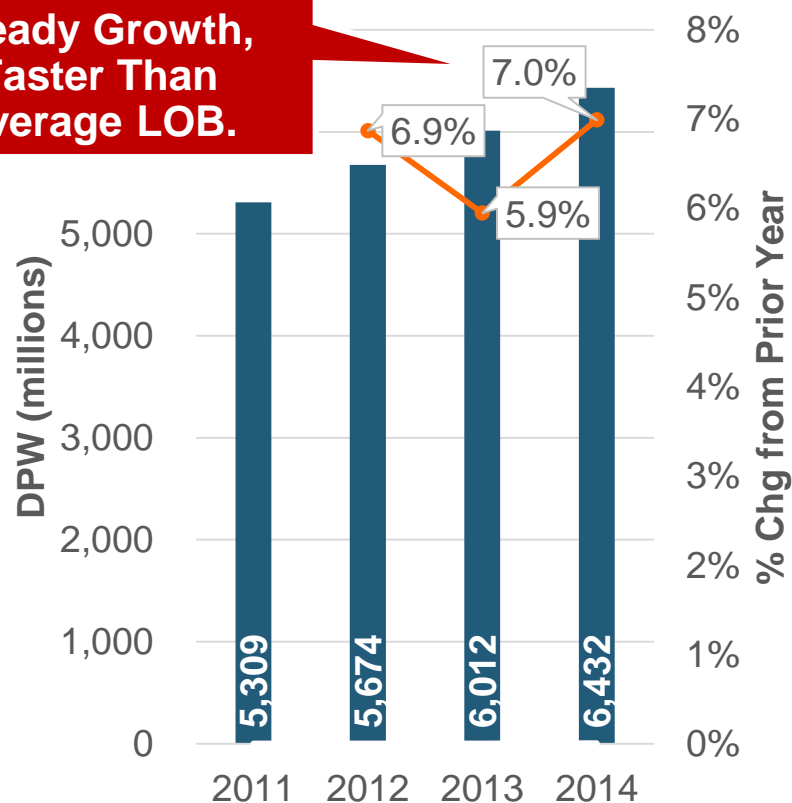


**Like Most Lines, Rates Have Been Flat Countrywide This Year.**

# D&O Countrywide Premium & Loss

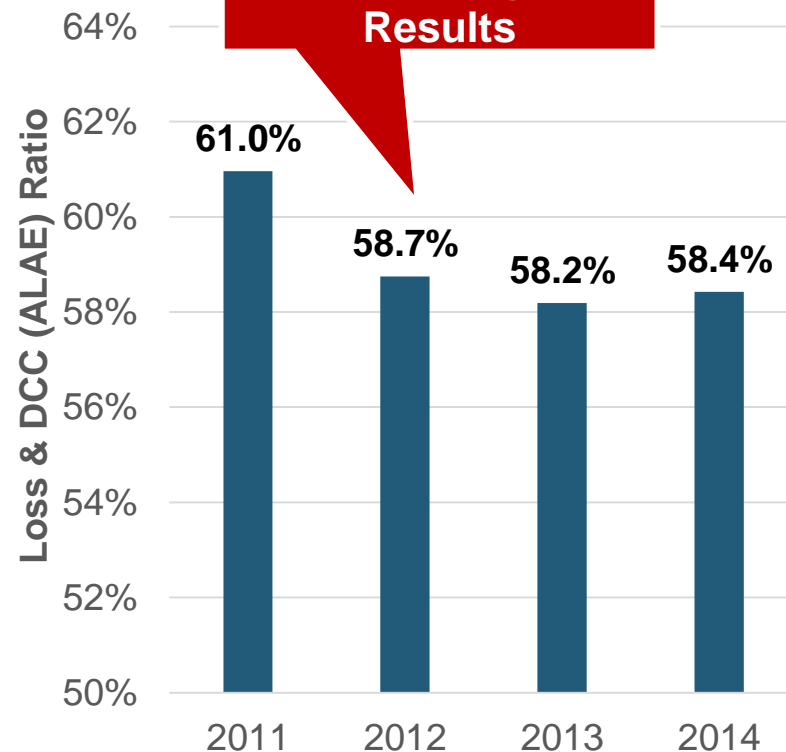
## Monoline Premium, Growth

Steady Growth,  
Faster Than  
Average LOB.



## Monoline Direct Loss Ratio

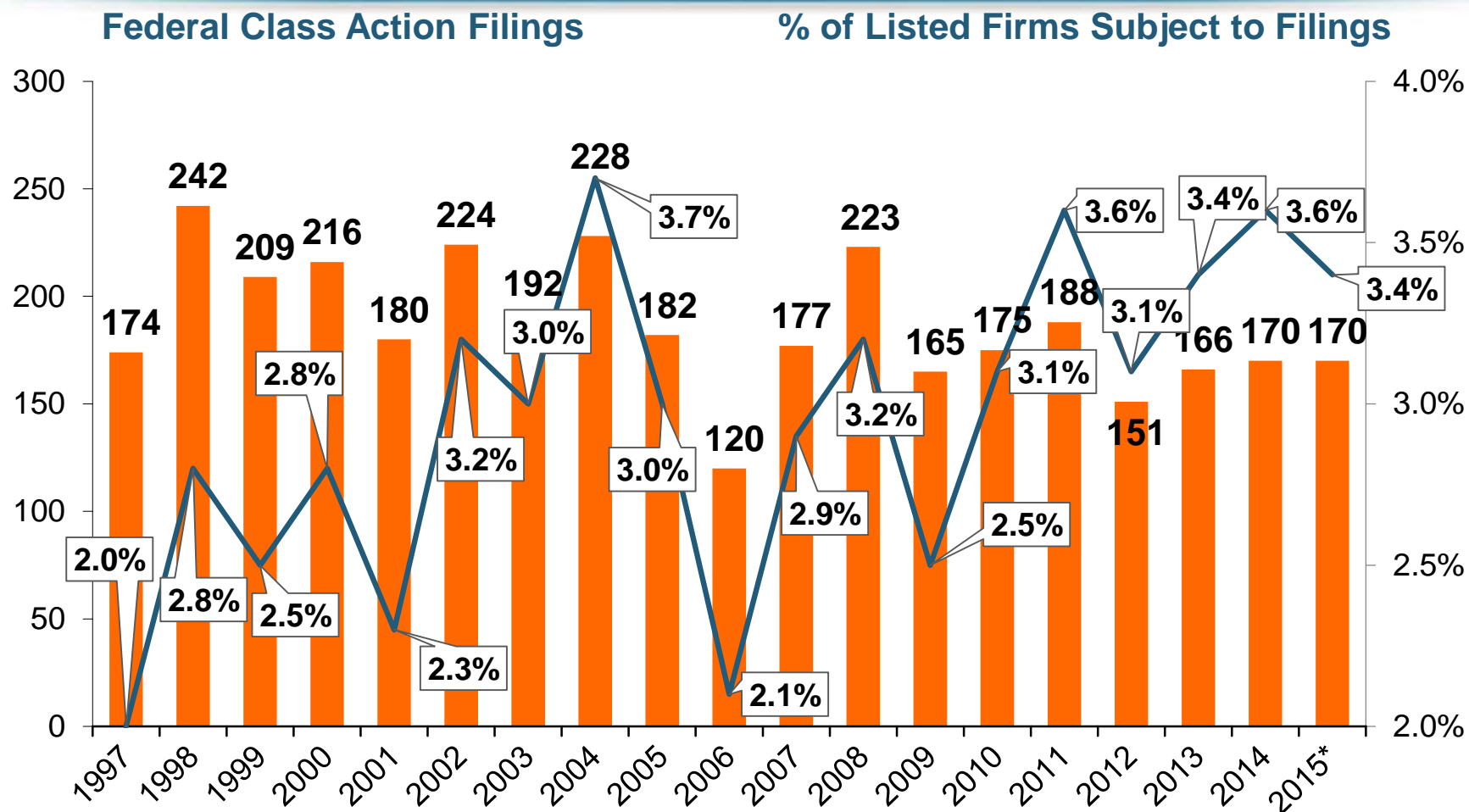
Little Change in  
Results



Source: SNL Financial, Insurance Information Institute.



# D&O: Securities Litigation



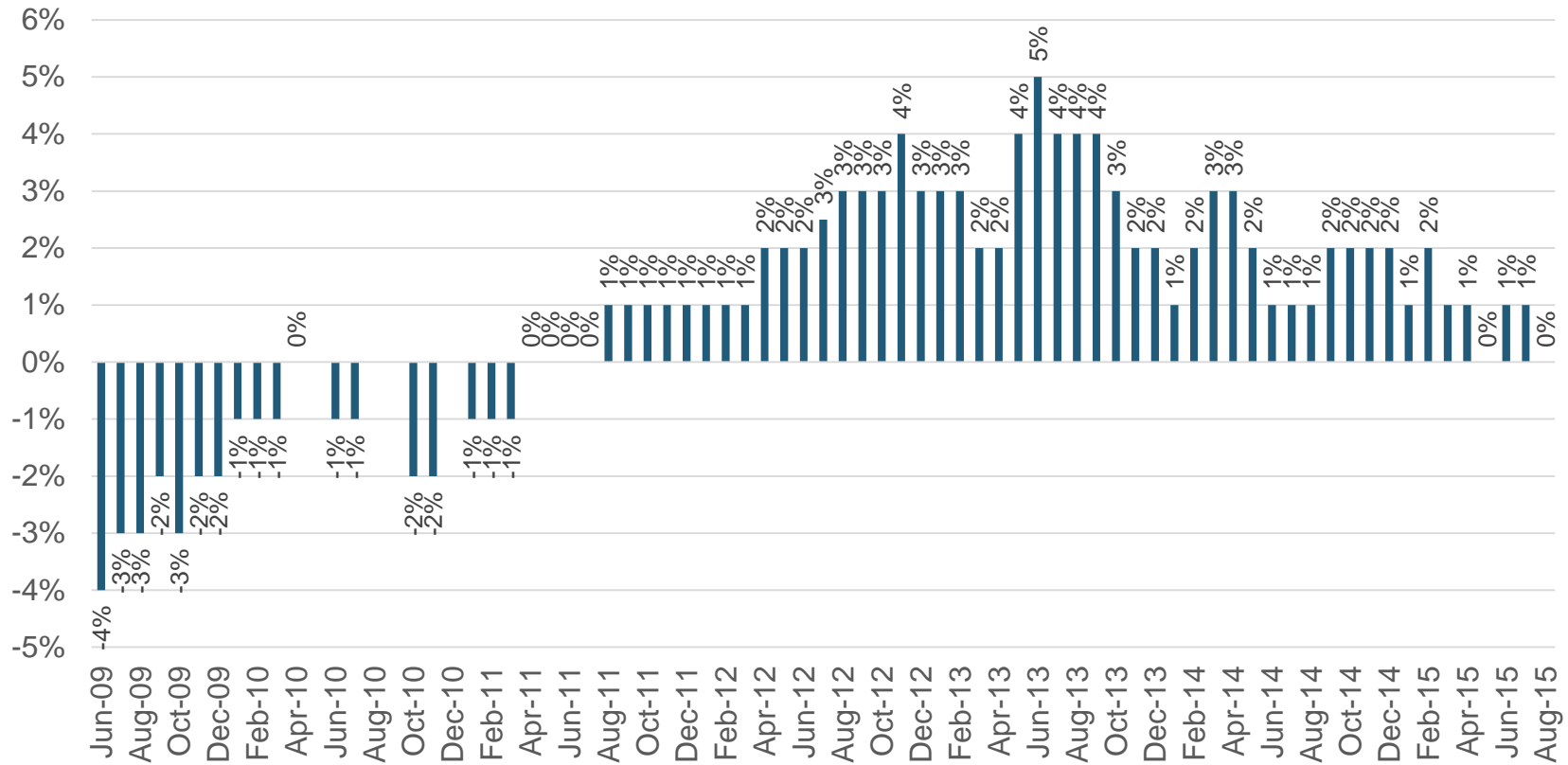
**Number of Filings Less Than Long-Term Average, But Chances of Class Action is Rising (Fewer Listed Companies)**

\* Annualized based on First-Half Filings

Sources: Securities Class Action Clearinghouse, Cornerstone Research, Insurance Information Institute.

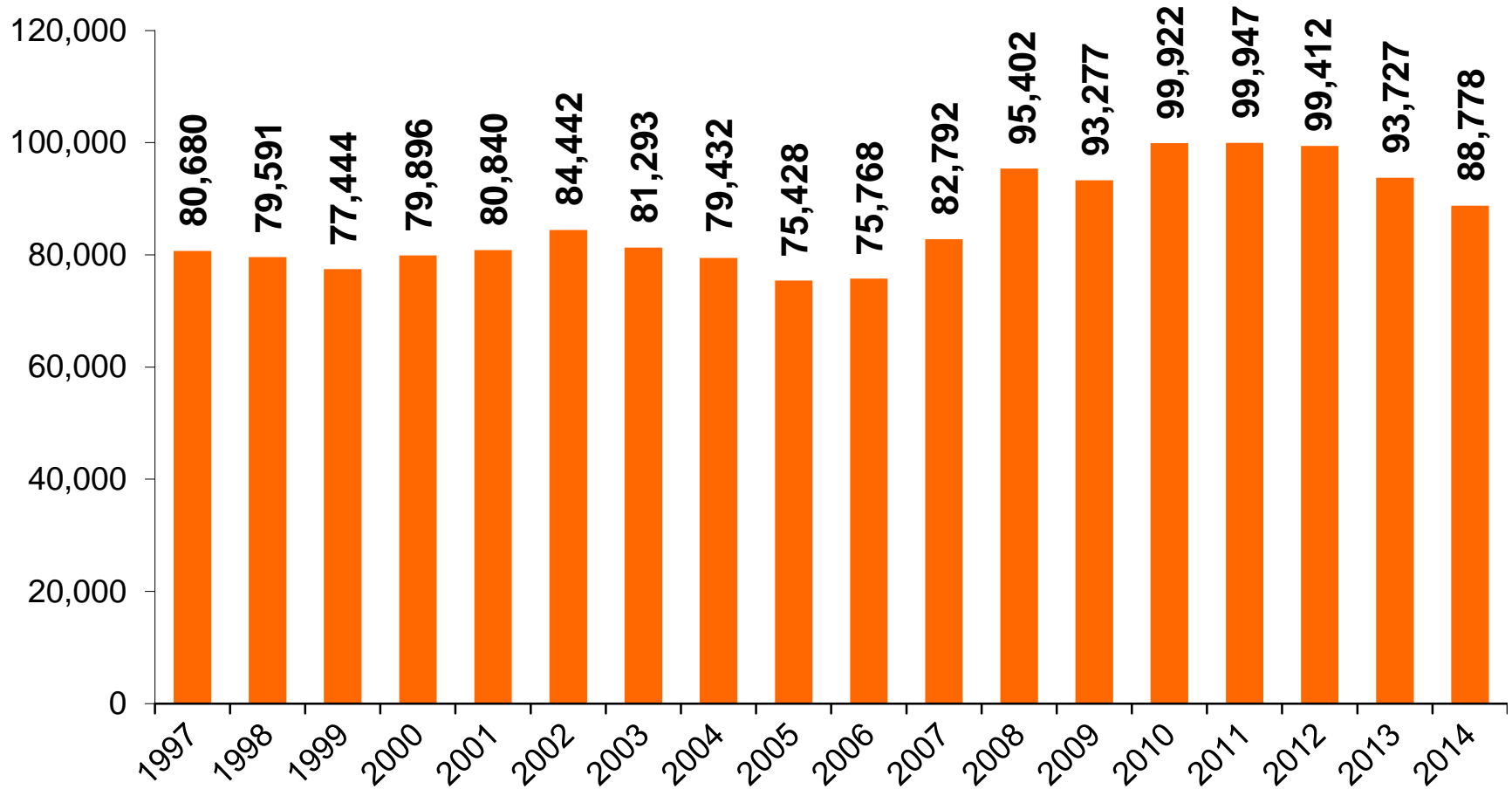
- **Filings Against Foreign Issuers (Listed in US, HQ Outside U.S.) Is Rising**
  - ◆ 1.4% of All Filings in 2000 vs. 3.9% in 2015 (Annualized)
  - ◆ Foreign Issuer More Likely to Face Action Than S&P500 Firm
  
- **% Dismissed Within Three-Years Is Rising**
  - ◆ 57% of 2011 Filings (Most Recent with Three Years) vs. 28% in 2000
  - ◆ More Recent Cohort (2012-2014) Unlikely to Match That Record
  
- **On the Wane: Chinese Reverse Mergers: 13 in 2014 vs. 43 in 2011**

# EPLI Rate Change by Month (vs. Year Earlier)



**Like Most Lines, Rates Have Been Flat Countrywide This Year.**

# EEOC Charge Statistics



**Overall Filings Declining – Growth In Title VII (discrimination allegations)  
Retaliation, Disability Charges**

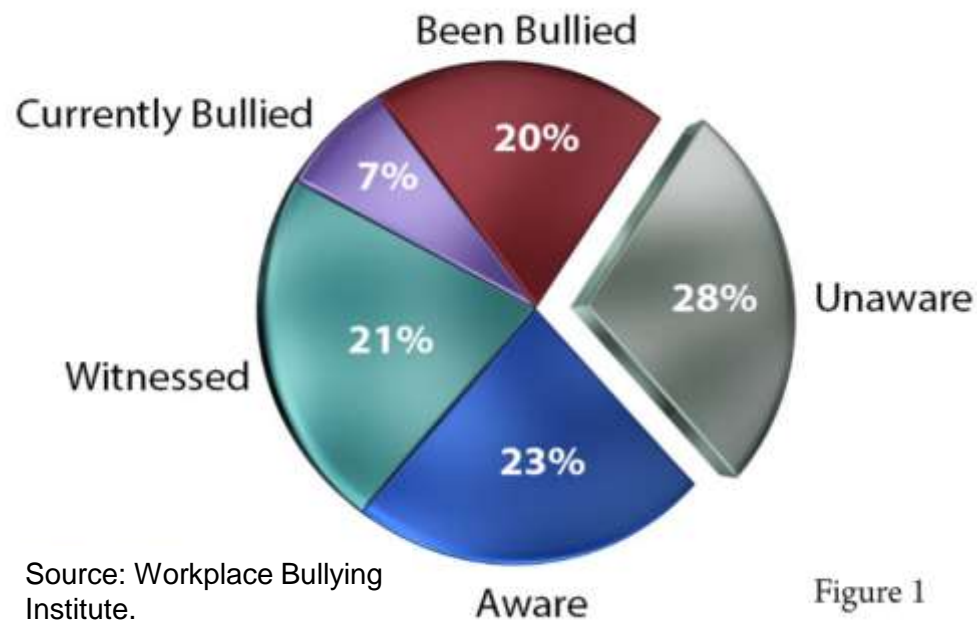
## ■ GINA (Genetic Information Nondiscrimination Act) Prohibits Work Discrimination Based on Genetic Information

- ◆ 333 EEOC Charges in FY2014
- ◆ Zero in FY2009

## ■ Bullying/Cyberbullying

## ■ Interns

## ■ Religious Attire at Work





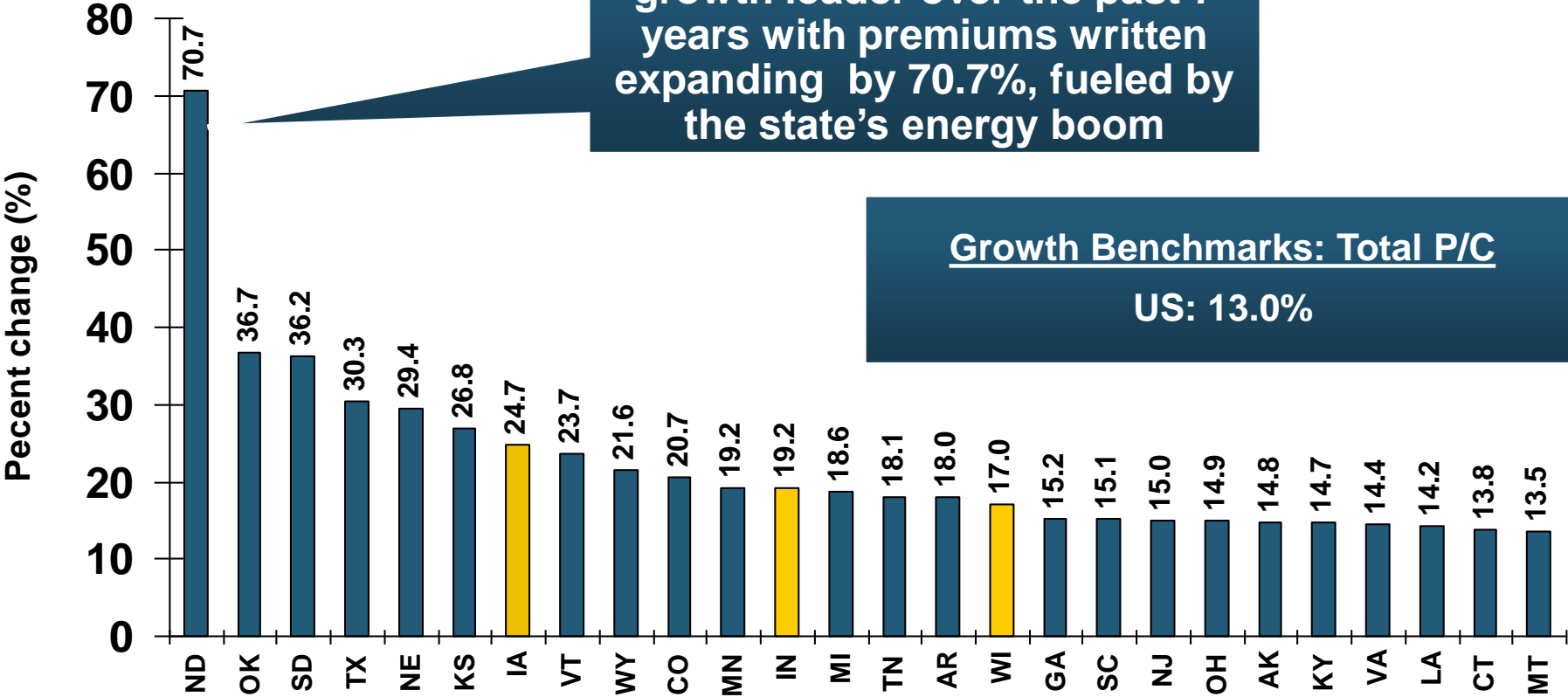
# Profitability and Growth in Midwest P/C Insurance Markets

## Analysis by Line and Nearby State Comparisons

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

## Top 25 States

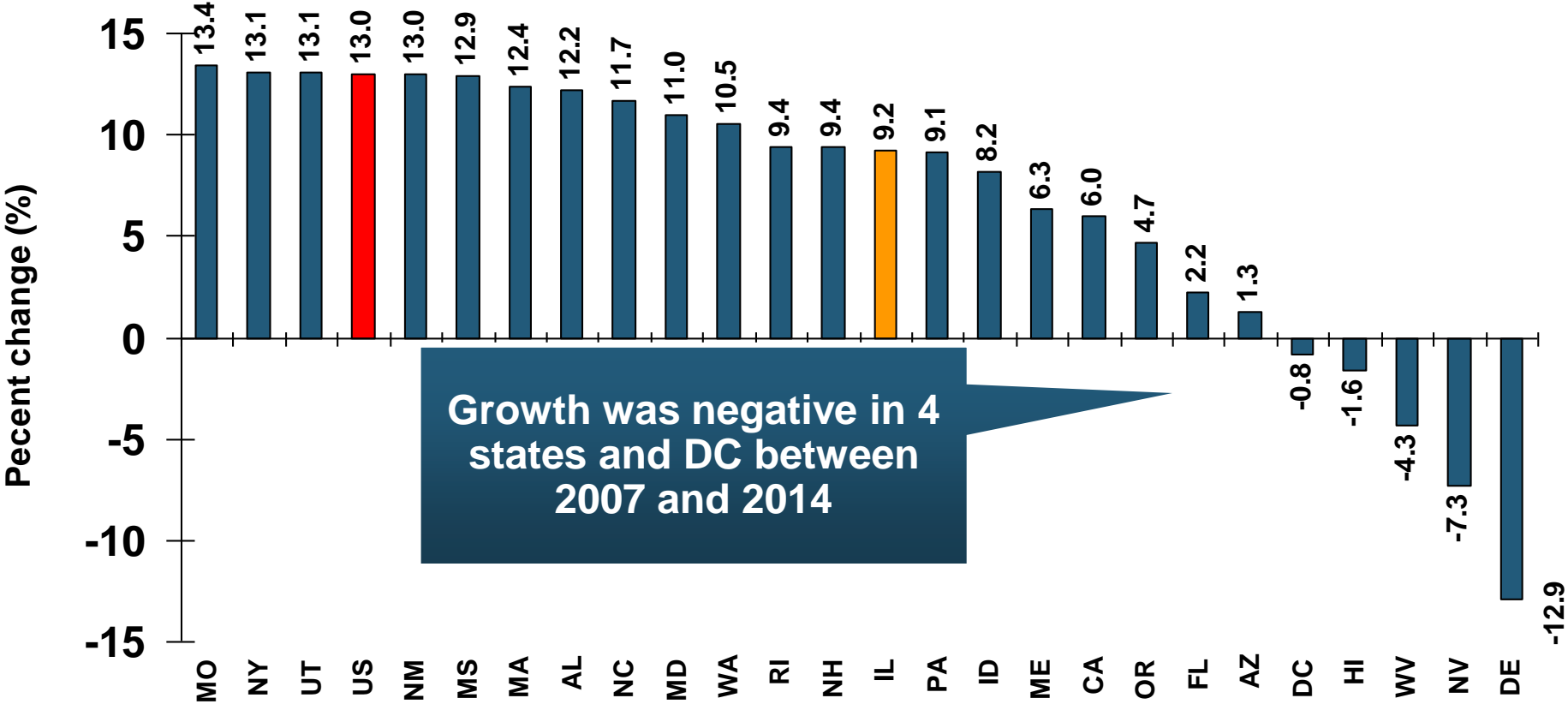
North Dakota was the country's growth leader over the past 7 years with premiums written expanding by 70.7%, fueled by the state's energy boom



Sources: SNL Financial LC.; Insurance Information Institute.

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

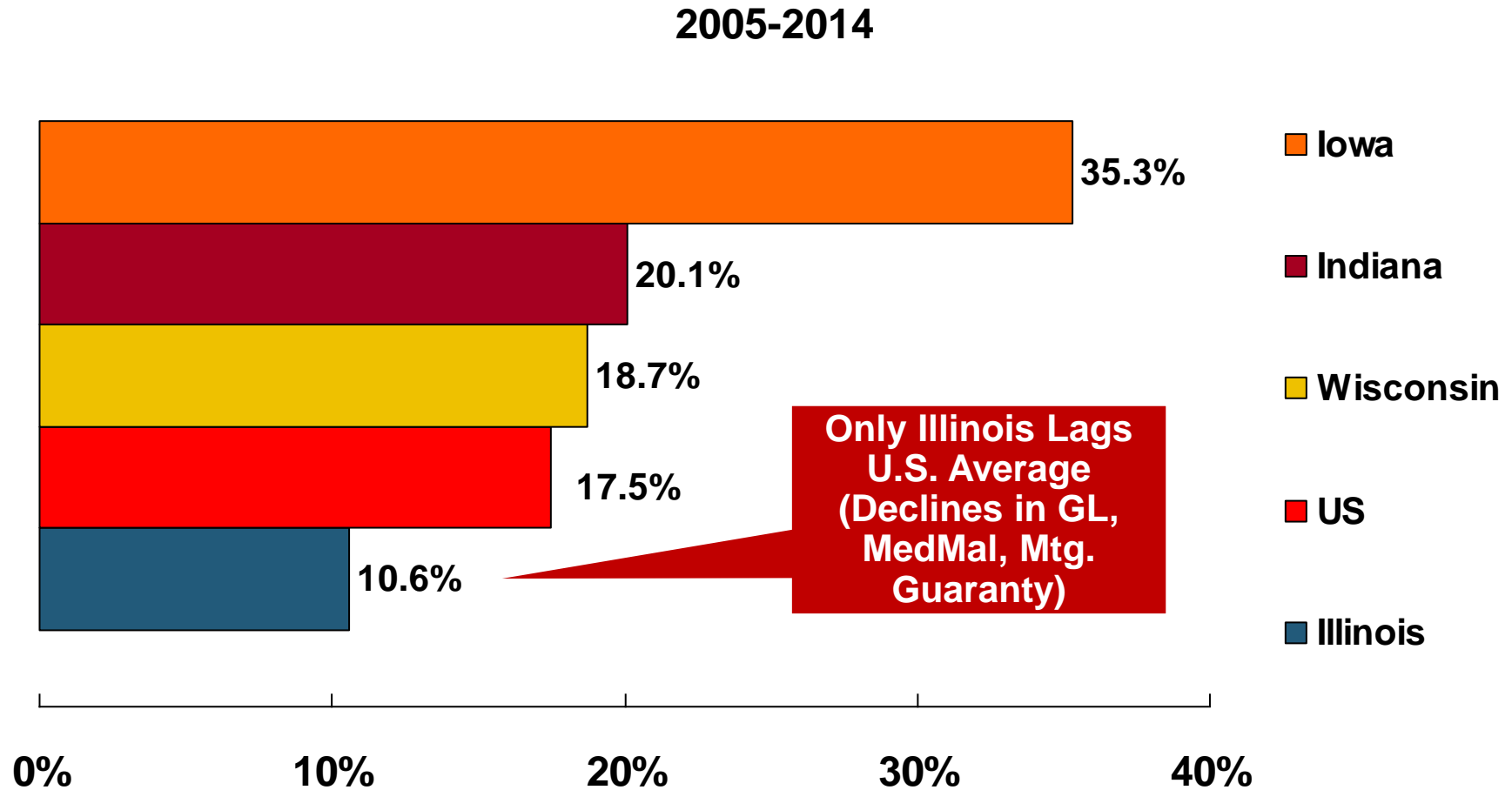
## Bottom 25 States



Sources: SNL Financial LC.; Insurance Information Institute.

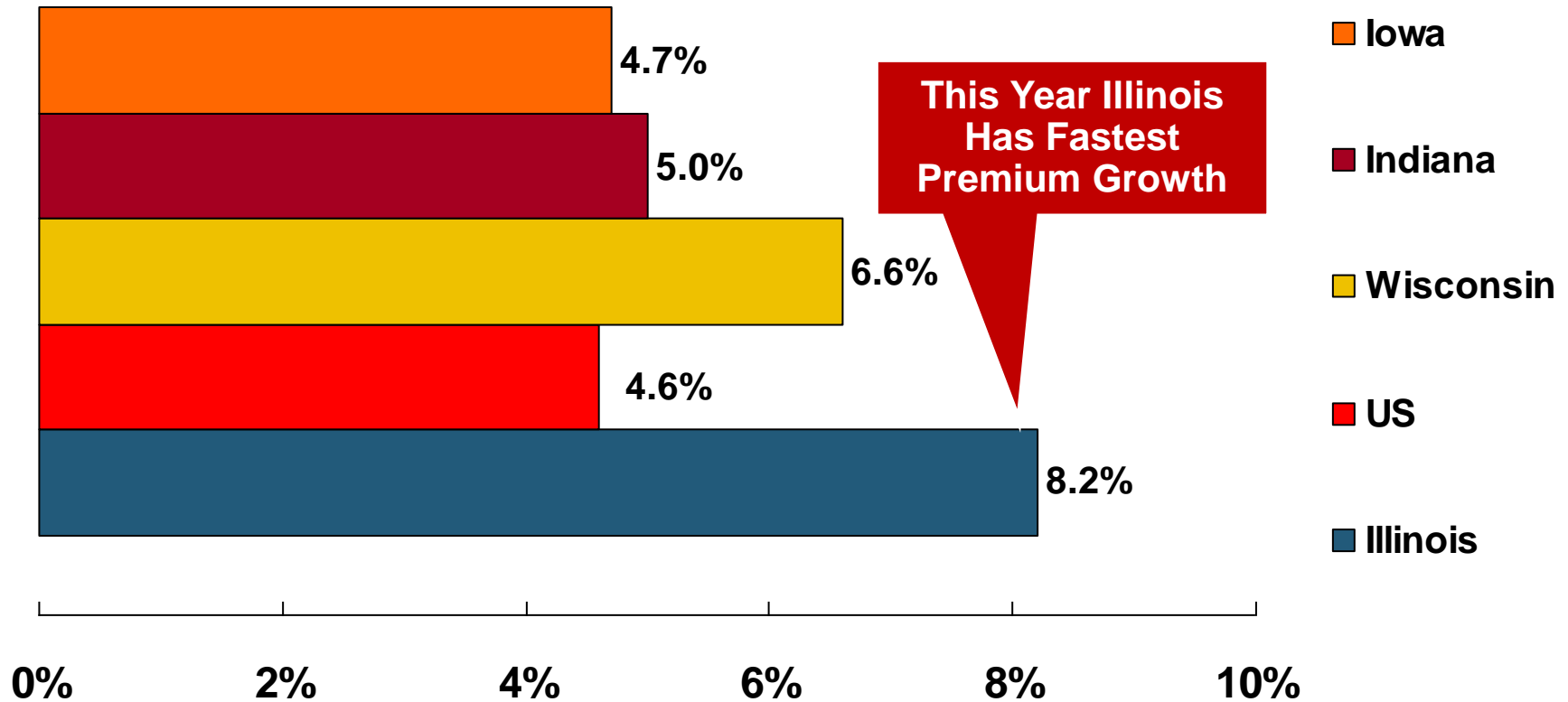


# All Lines: 10-Year DPW Growth, IL & Nearby States

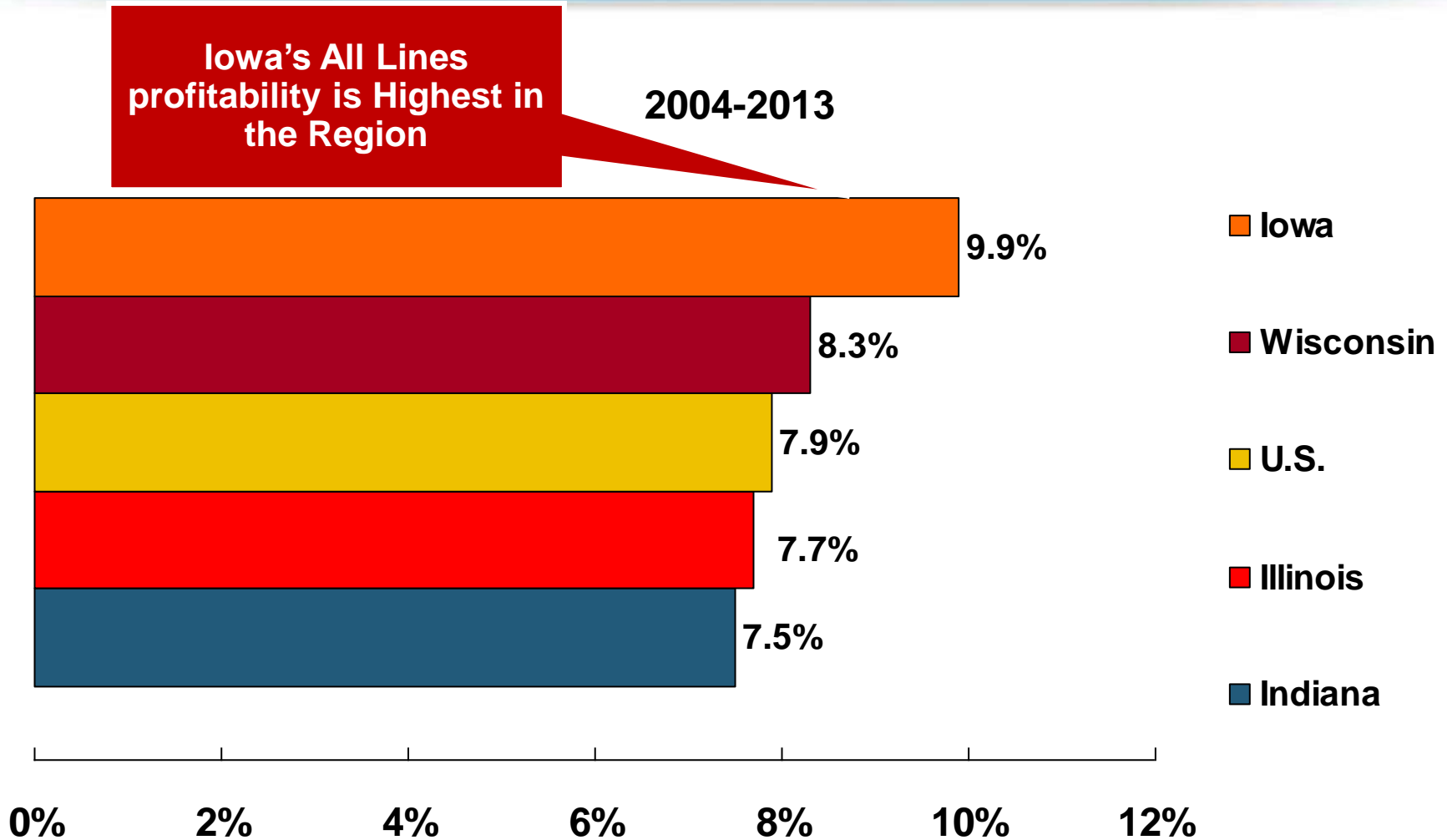


# All Lines: 2015 DPW Growth, IL & Nearby States

Through Q2 2015

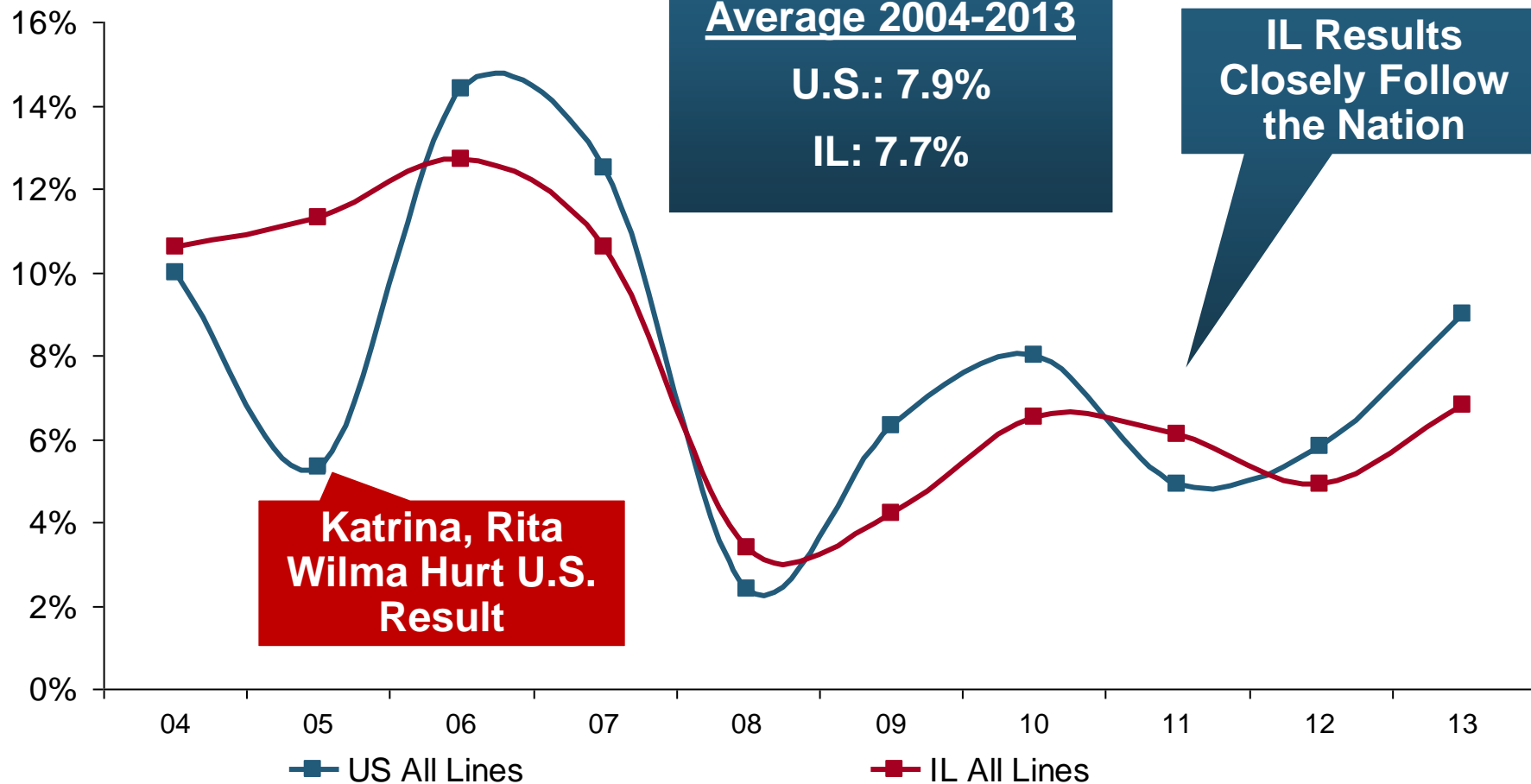


# All Lines: 10-Year Average RNW IL & Nearby States

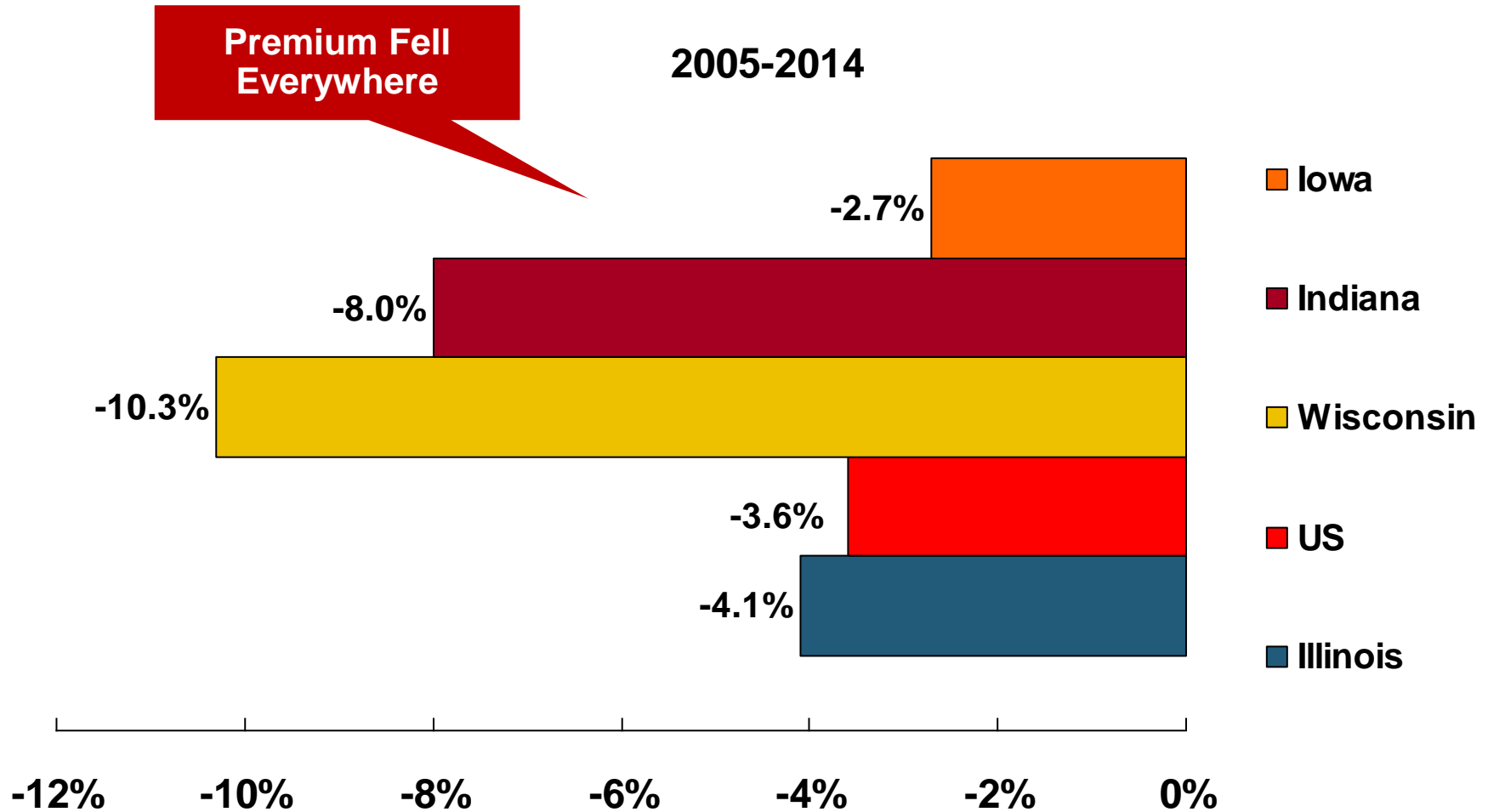


# RNW All Lines: IL vs. U.S., 2004-2013

(Percent)

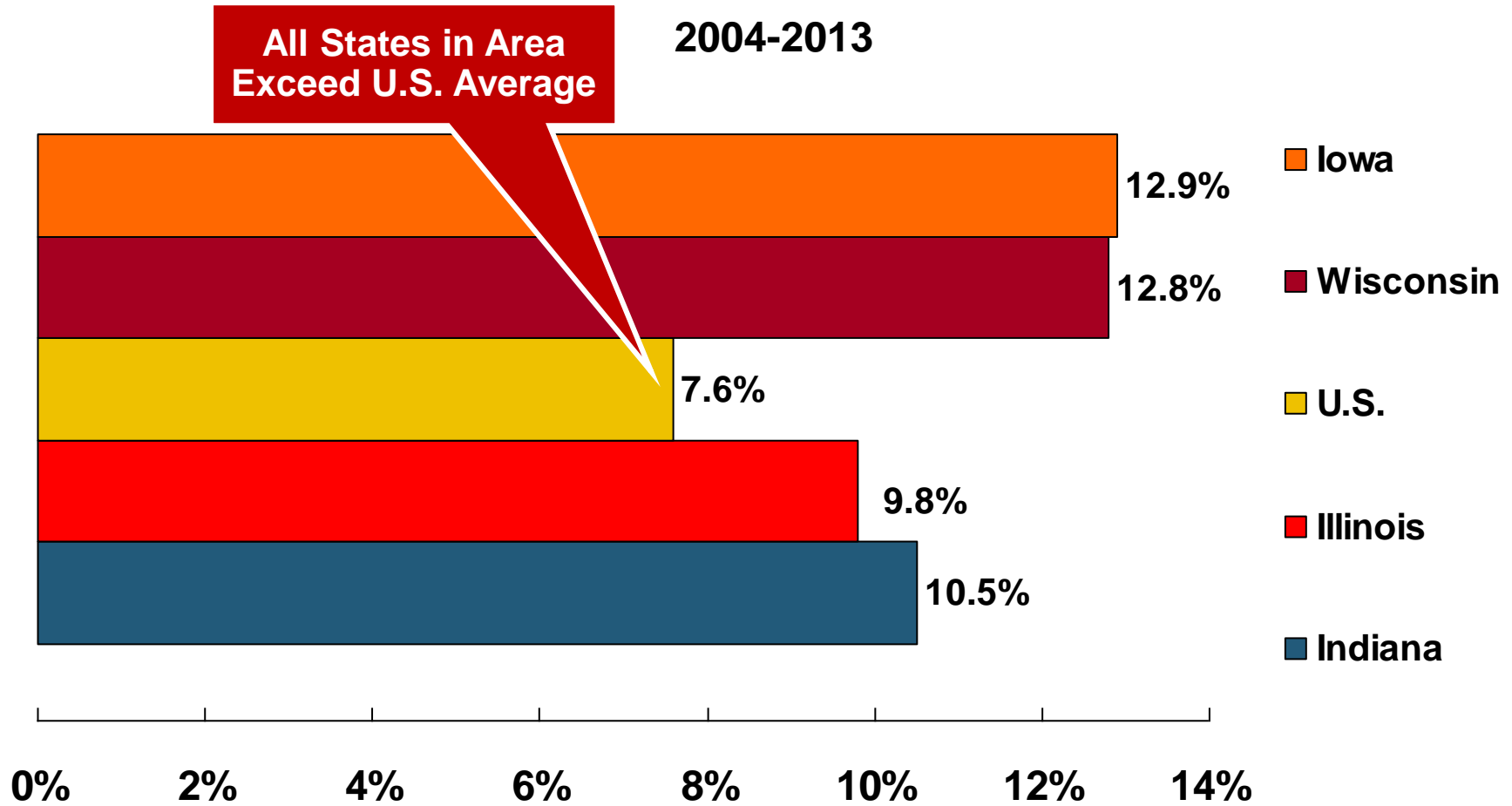


# Comm Auto: 10-Year DPW Growth, IL & Nearby States



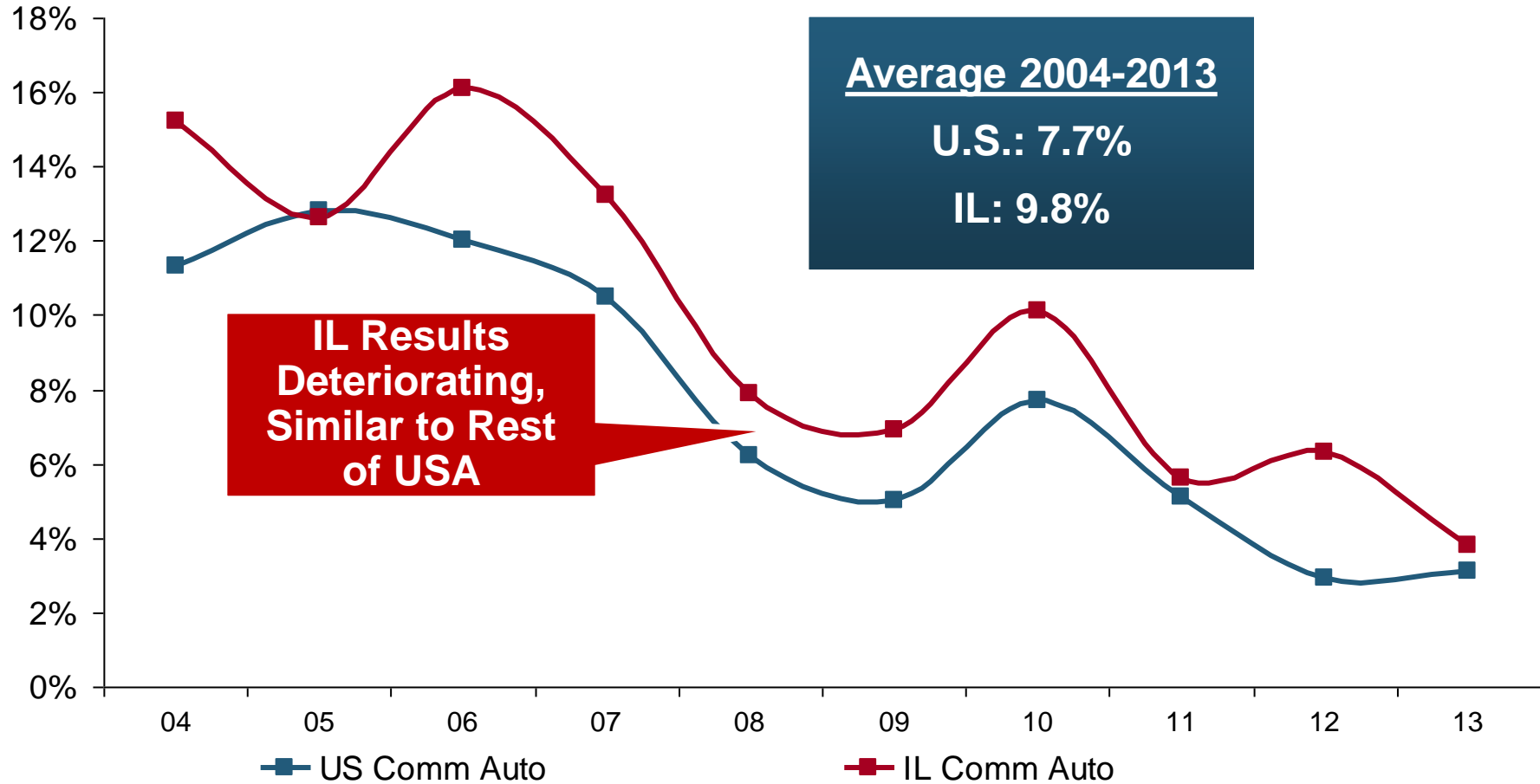
Other Liability Excludes Products, Medical Malpractice.  
Source: SNL Financial, Insurance Information Institute.

# Commercial Auto: 10-Year Average RNW IL & Nearby States

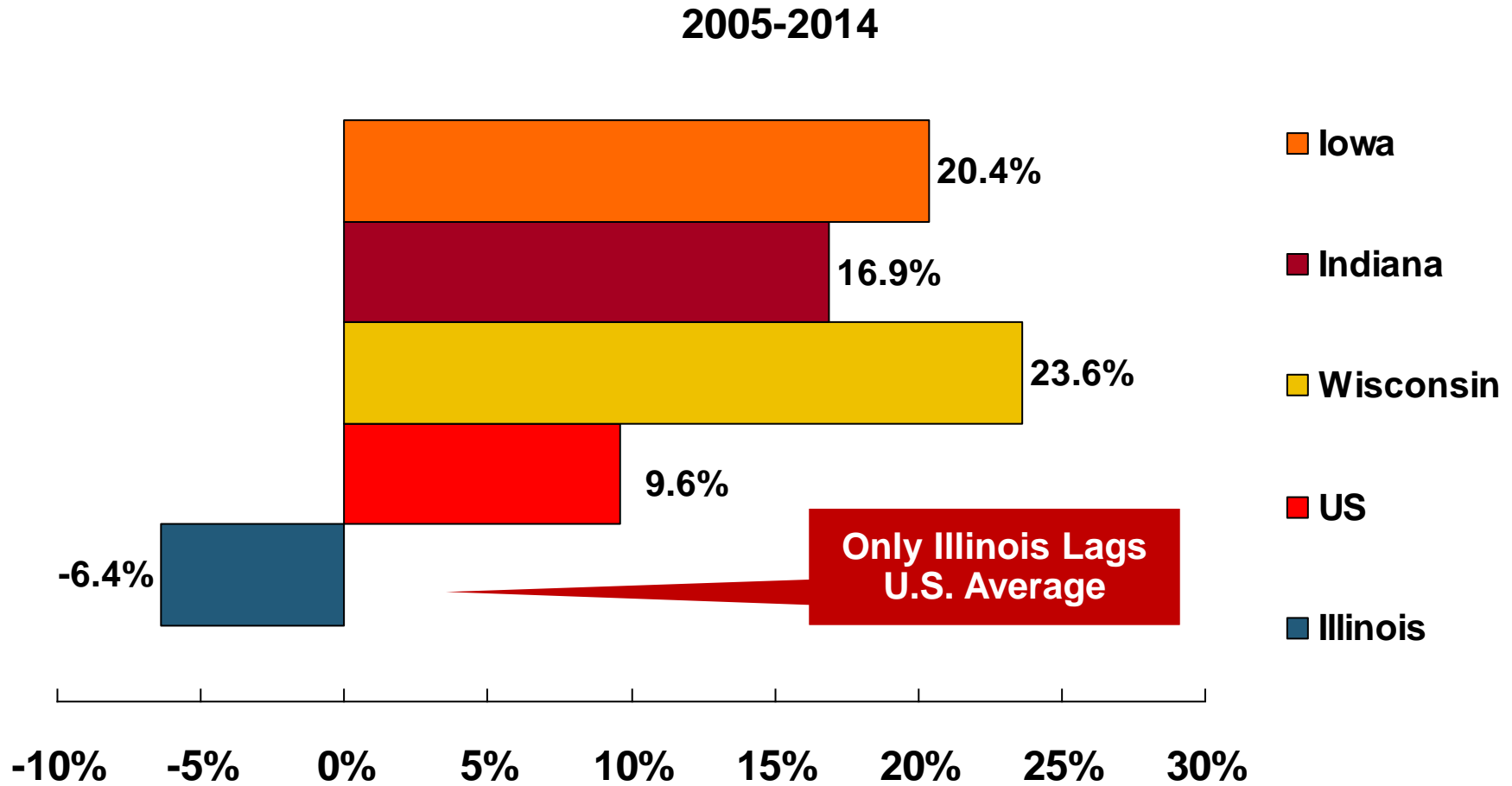


# RNW Comm. Auto: IL vs. U.S., 2004-2013

(Percent)



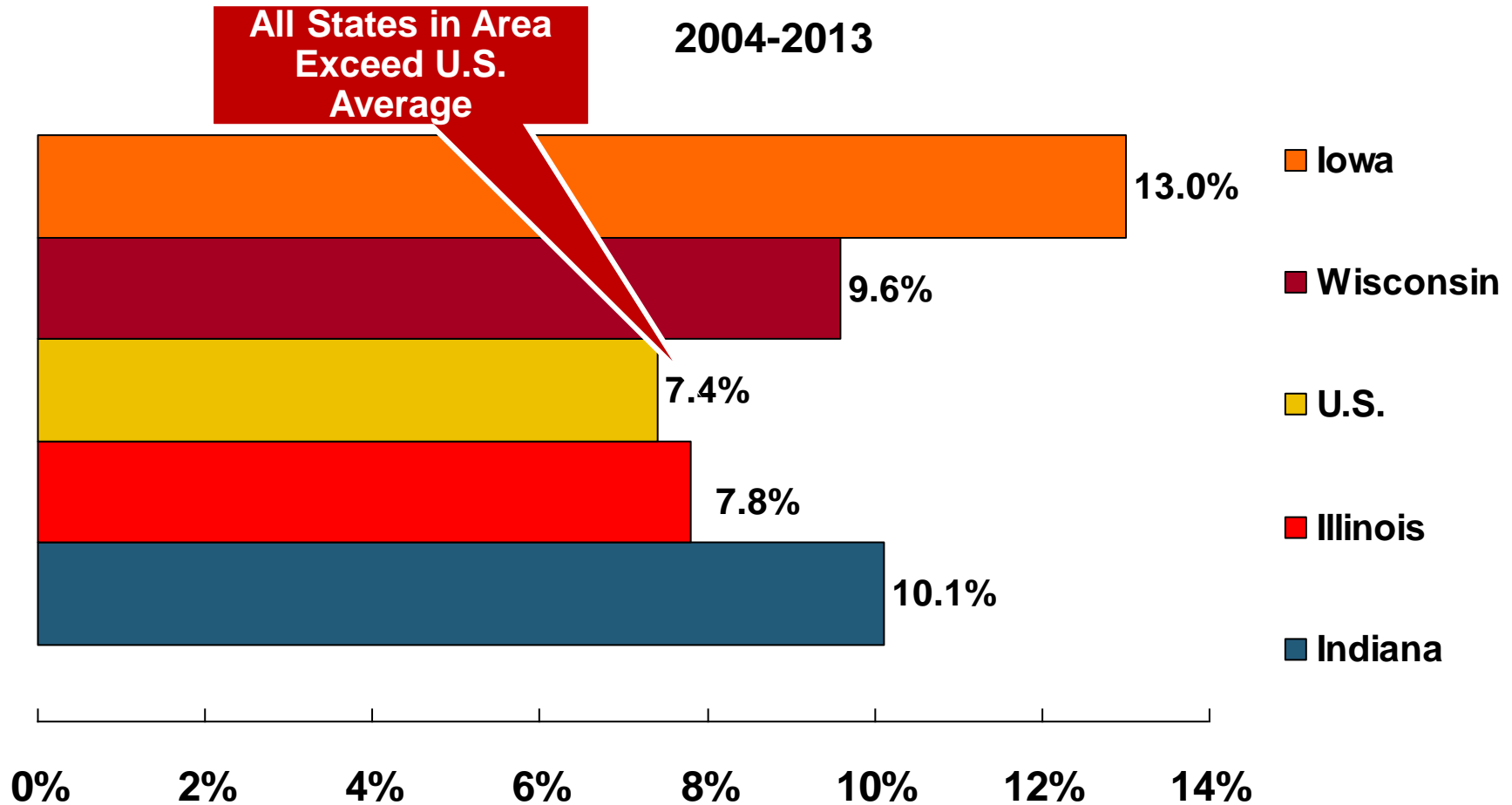
# Other Liability: 10-Year DPW Growth, IL & Nearby States



Other Liability Excludes Products, Medical Malpractice.  
Source: SNL Financial, Insurance Information Institute.

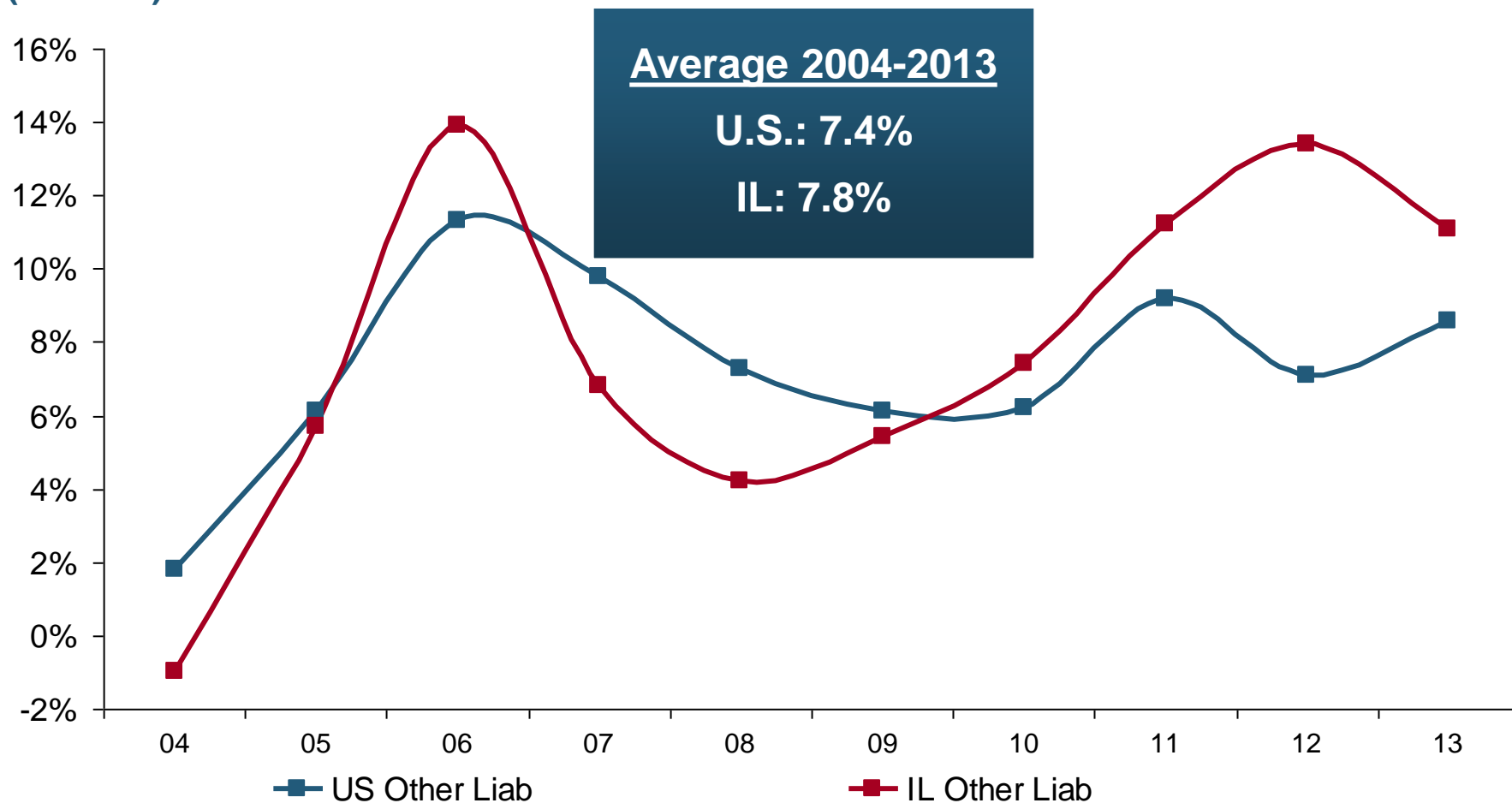


# Other Liability: 10-Year Average RNW IL & Nearby States



# RNW Other Liability\*: IL vs. U.S., 2004-2013

(Percent)



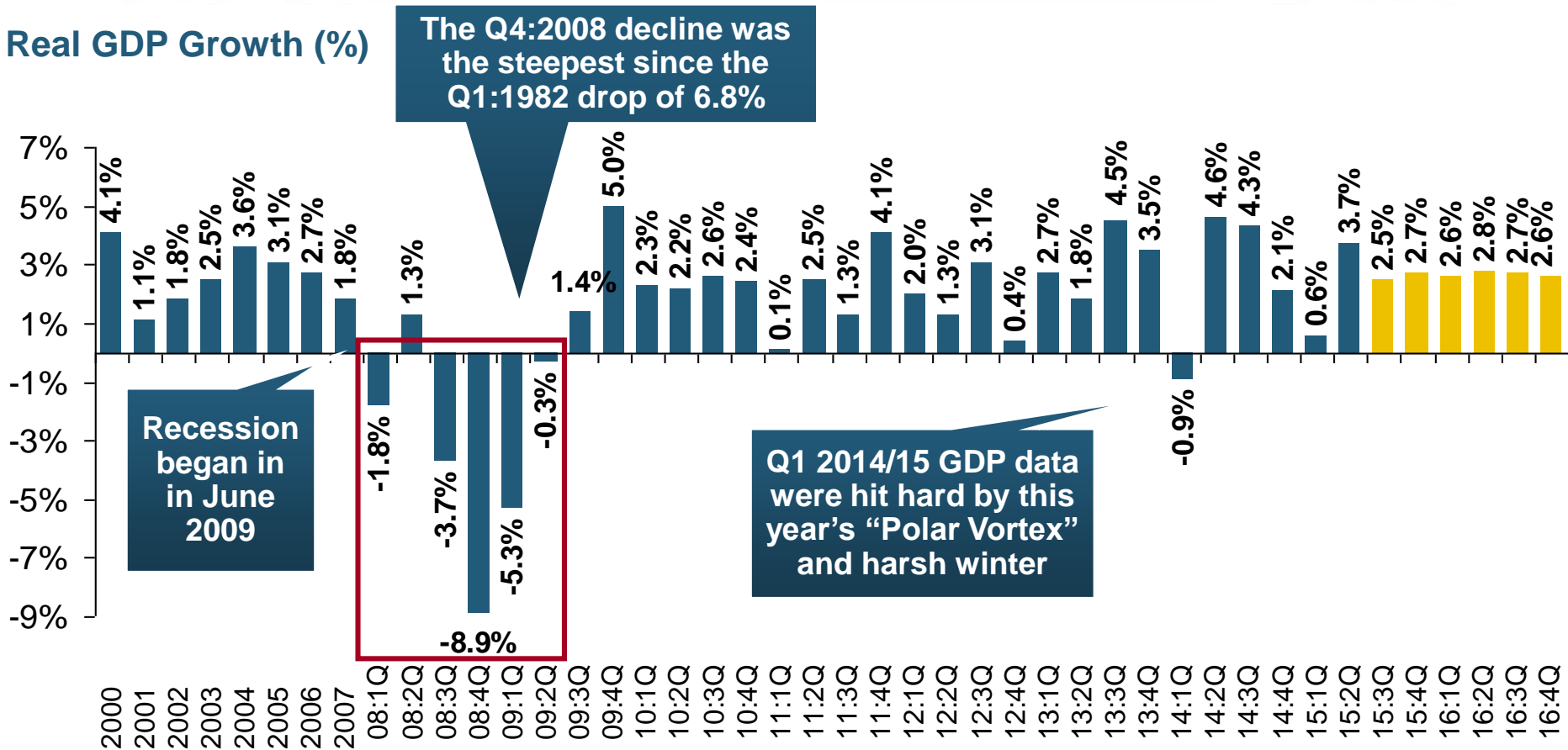
\* Occurrence, Claims-Made Combined. Products Liability through 2008.  
Source: NAIC, Insurance Information Institute

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

**Growth Will Expand Insurer Exposure  
Base Across Most Lines**

# US Real GDP Growth\*

Real GDP Growth (%)

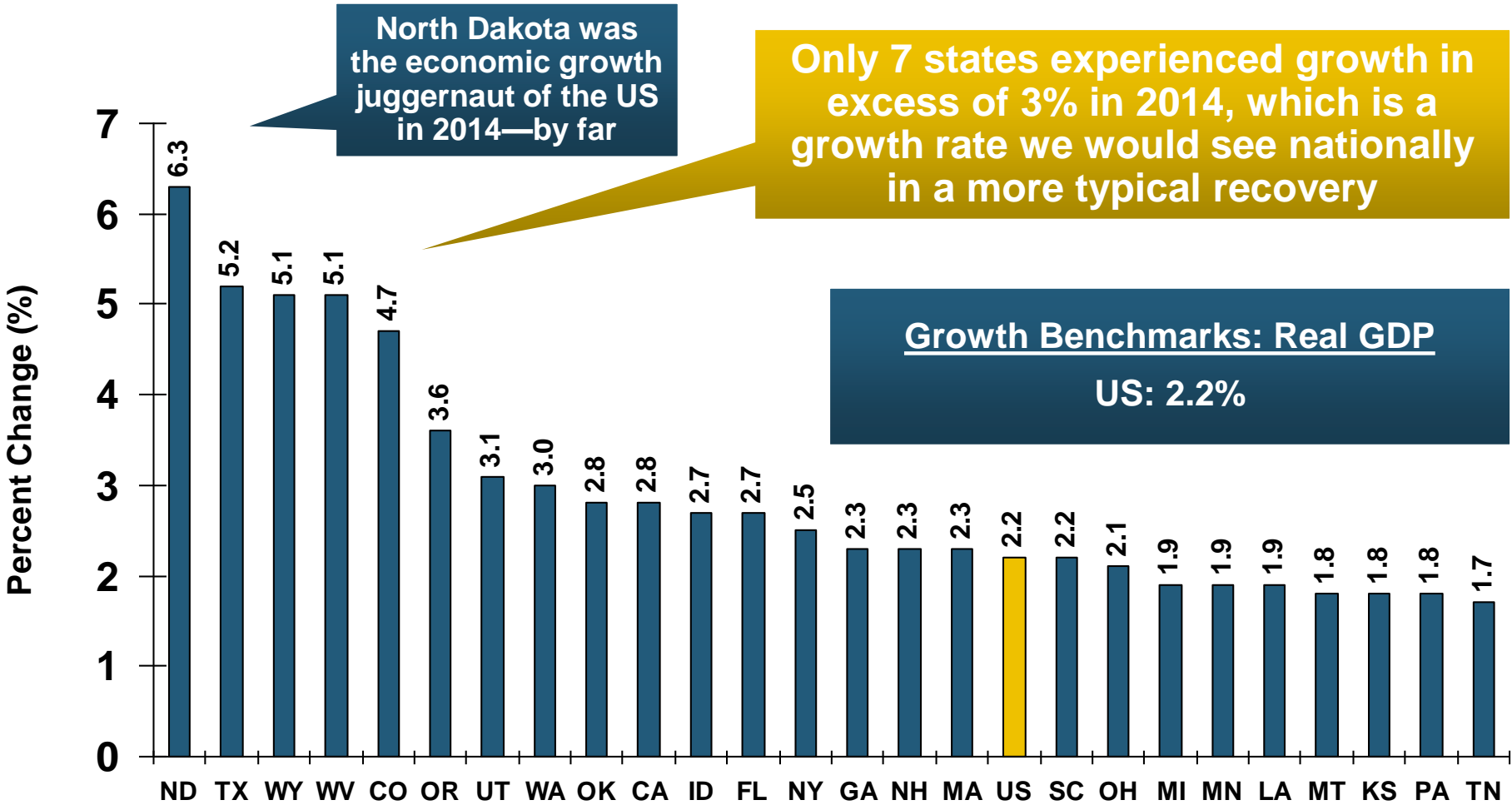


**Demand for Insurance Should Increase in 2015 as GDP Growth Accelerates Modestly and Gradually Benefits the Economy Broadly**

\* Estimates/Forecasts from Blue Chip Economic Indicators.

Source: US Department of Commerce, Blue Economic Indicators 9/15; Insurance Information Institute.

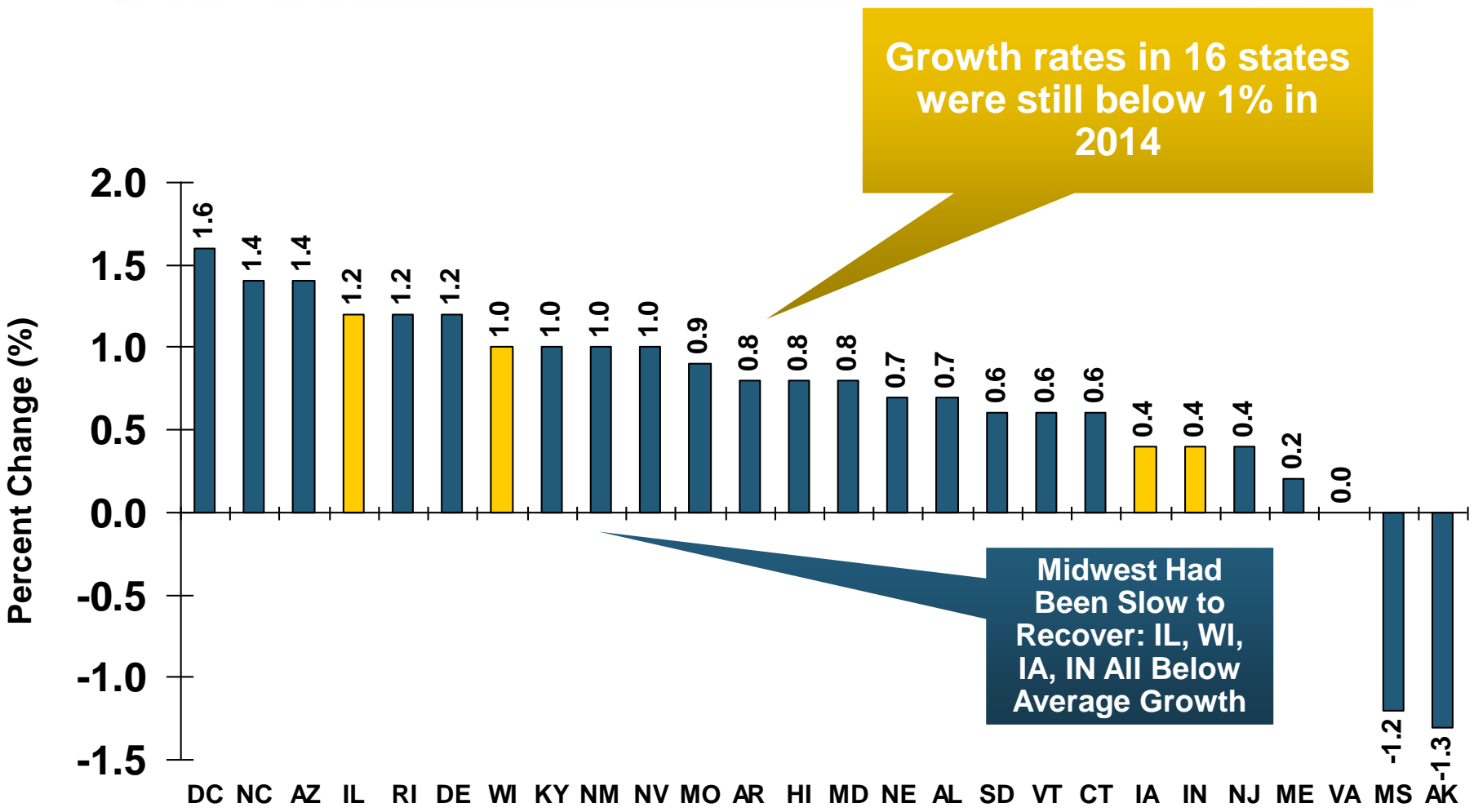
# Real GDP by State Percent Change, 2014\*: Highest 25 States



\*Advance statistics

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

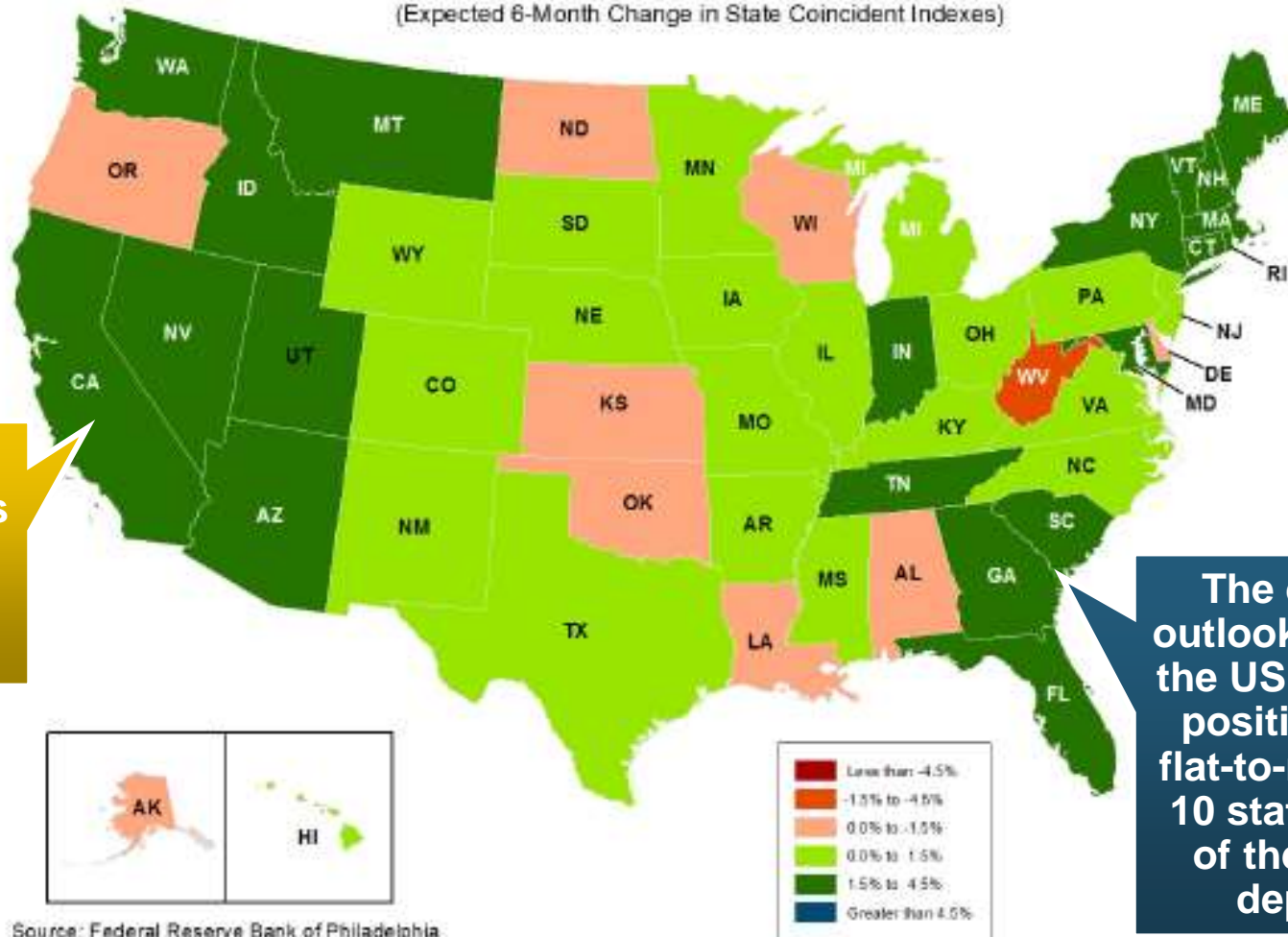
# Real GDP by State Percent Change, 2014\*: Lowest 25 States



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

# State Leading Economic Indicators through November 2015

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



Source: Federal Reserve Bank of Philadelphia

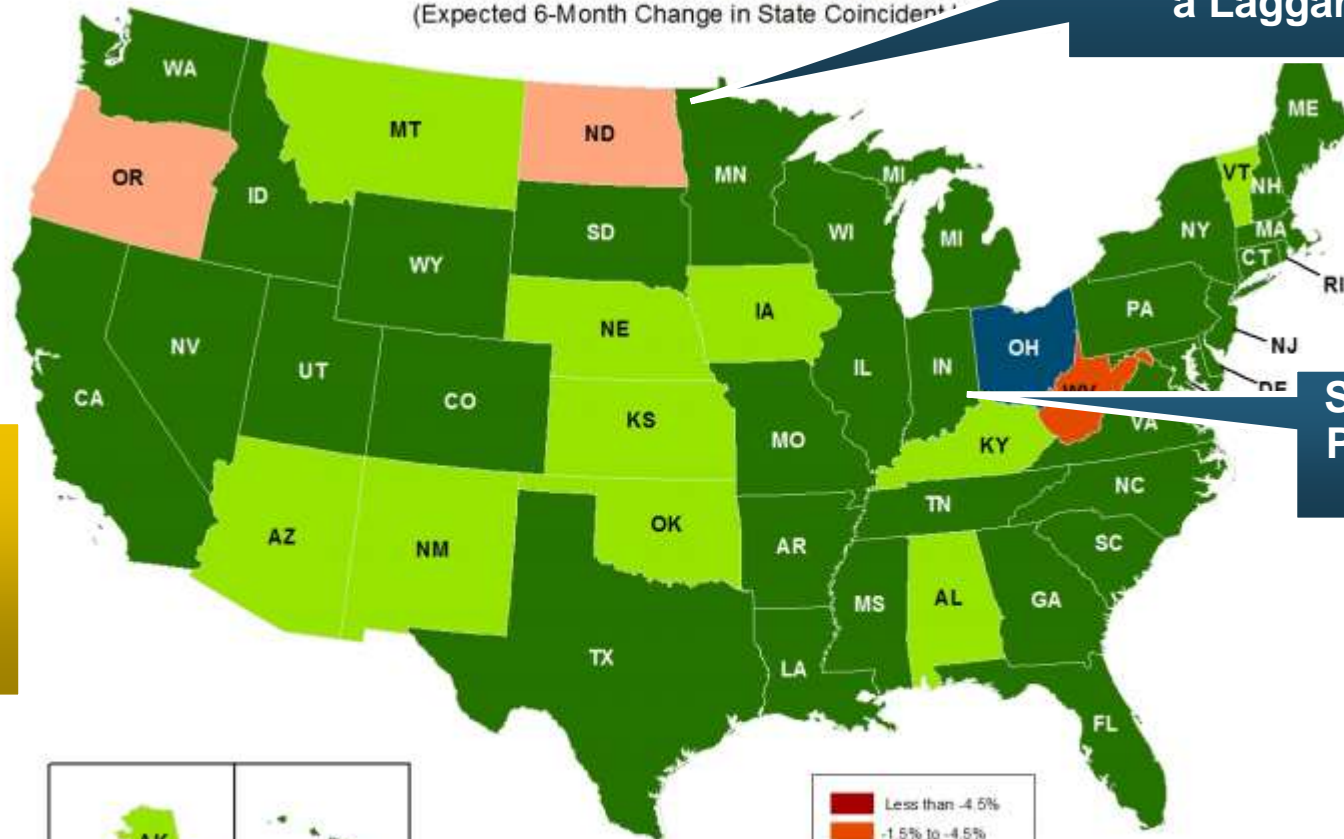
Growth in the West is finally beginning to pick up

The economic outlook for most of the US is generally positive, though flat-to-negative for 10 states, several of them energy dependent

# State Leading Economic Indicators through January 2016

**ND, Formerly A Leader, Becoming a Laggard.**

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



**Much of Nation Has Robust Outlook**

**Solid Growth Projected for Midwest.**



Source: Federal Reserve Bank of Philadelphia

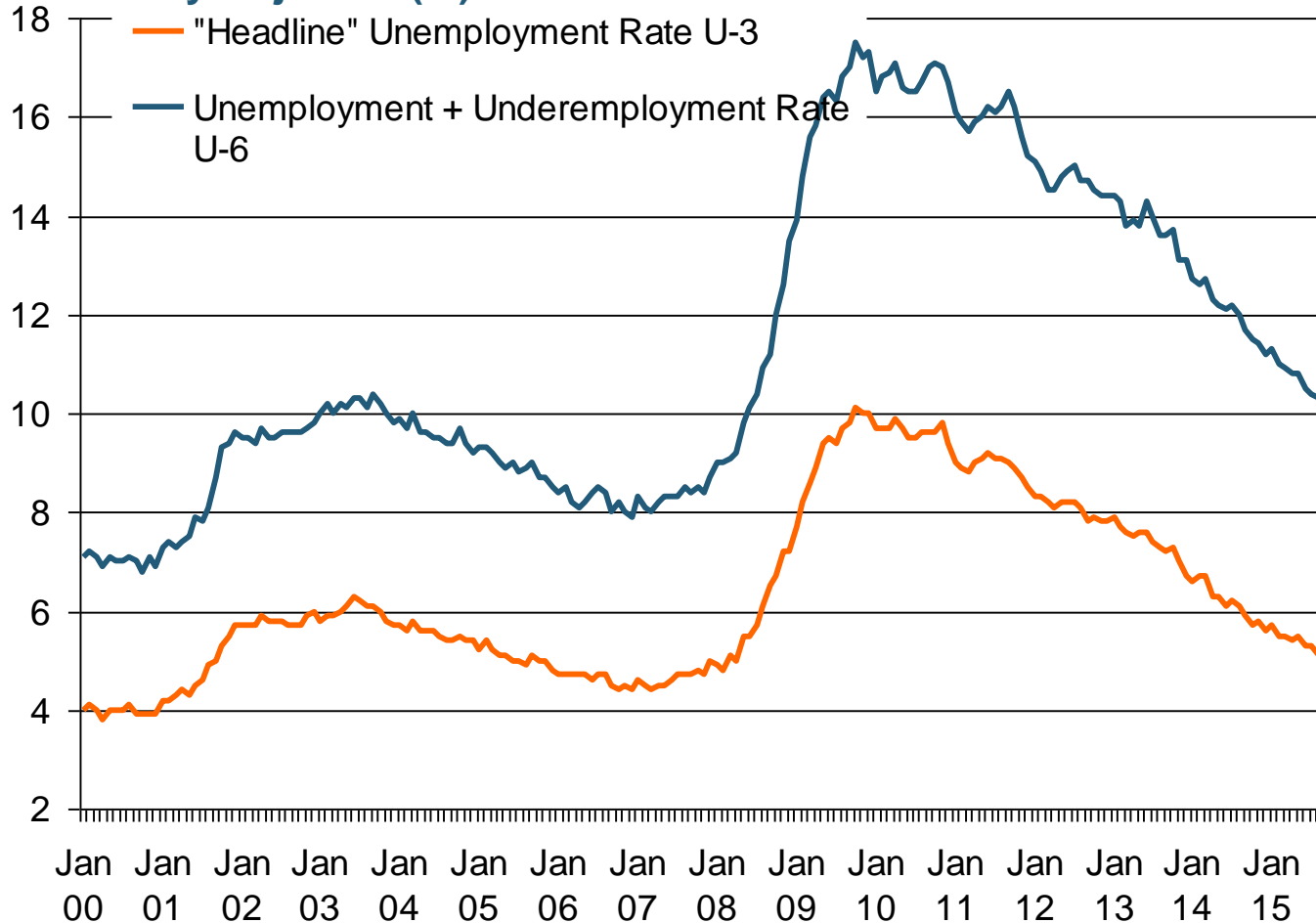


# Labor Market Trends

**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 9.6% in Sept. 2015. 8% to 10% is "normal."

"Headline" unemployment was 5.1% in Sept. 2015. 4.5% to 5.5% is "normal."

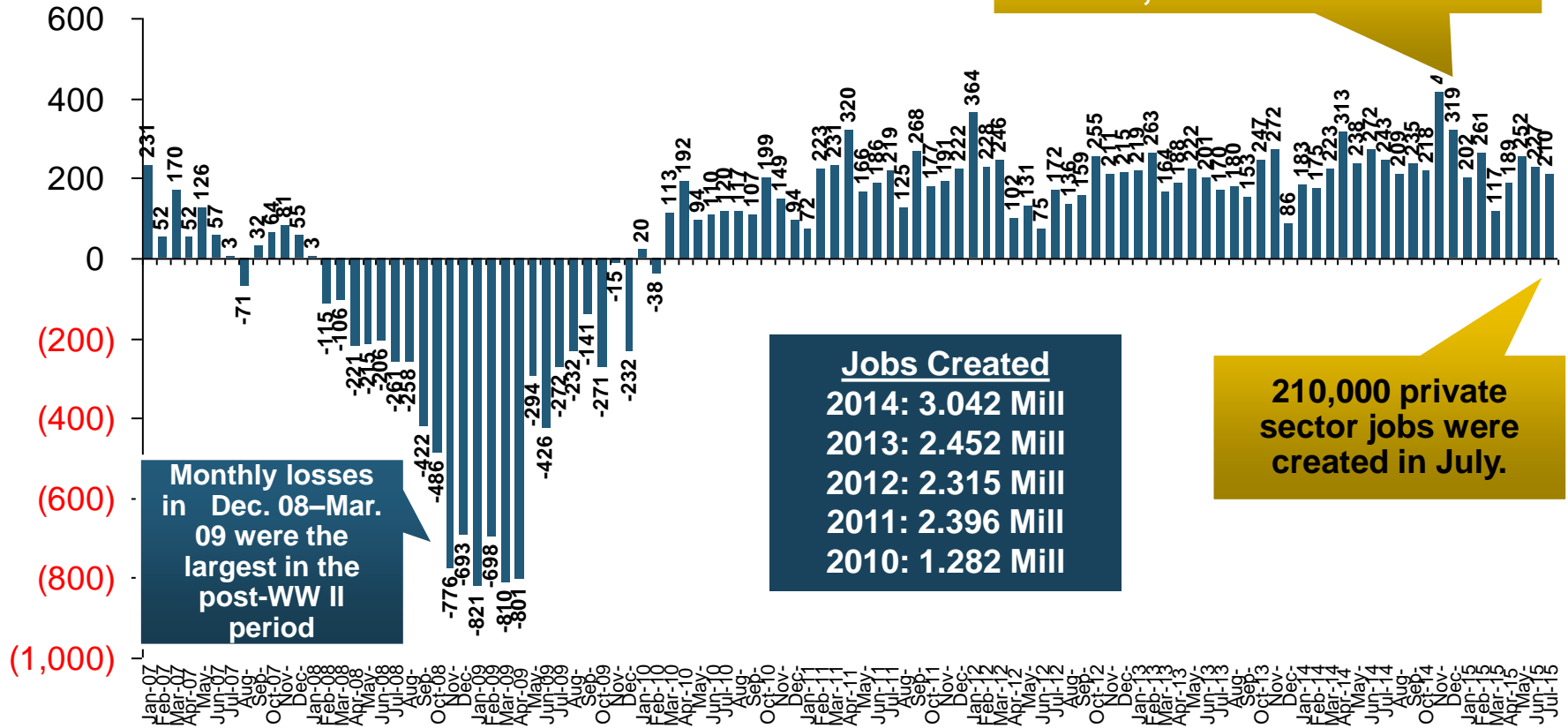
**Job Growth Has Been Slow, But Continues to Improve.**

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

# Monthly Change in Private Employment

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

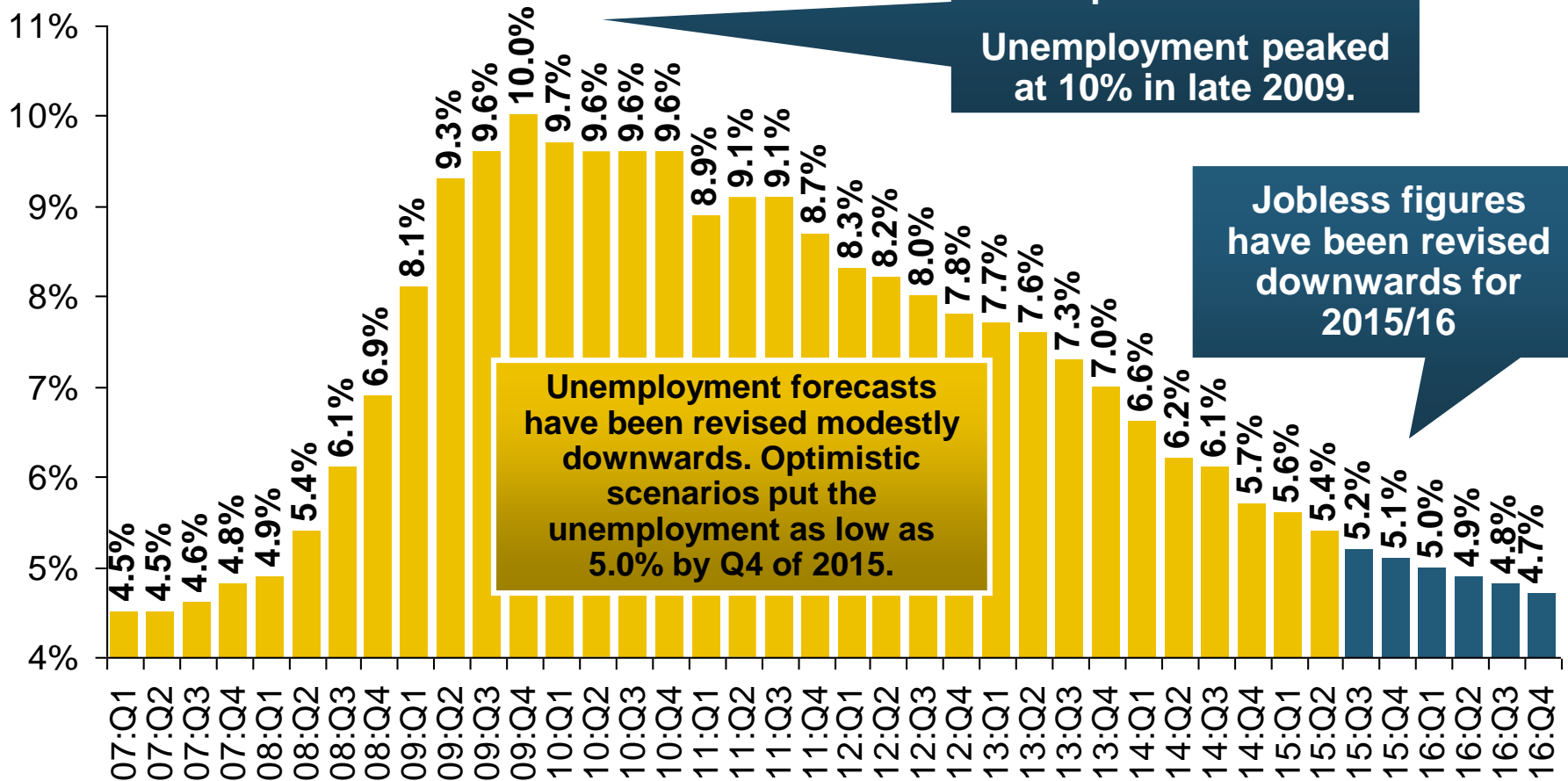
3,042,000 jobs were created in 2014, the most since 1997



Private Employers Added 12.84 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\*



Rising unemployment eroded payrolls and WC's exposure base.  
Unemployment peaked at 10% in late 2009.

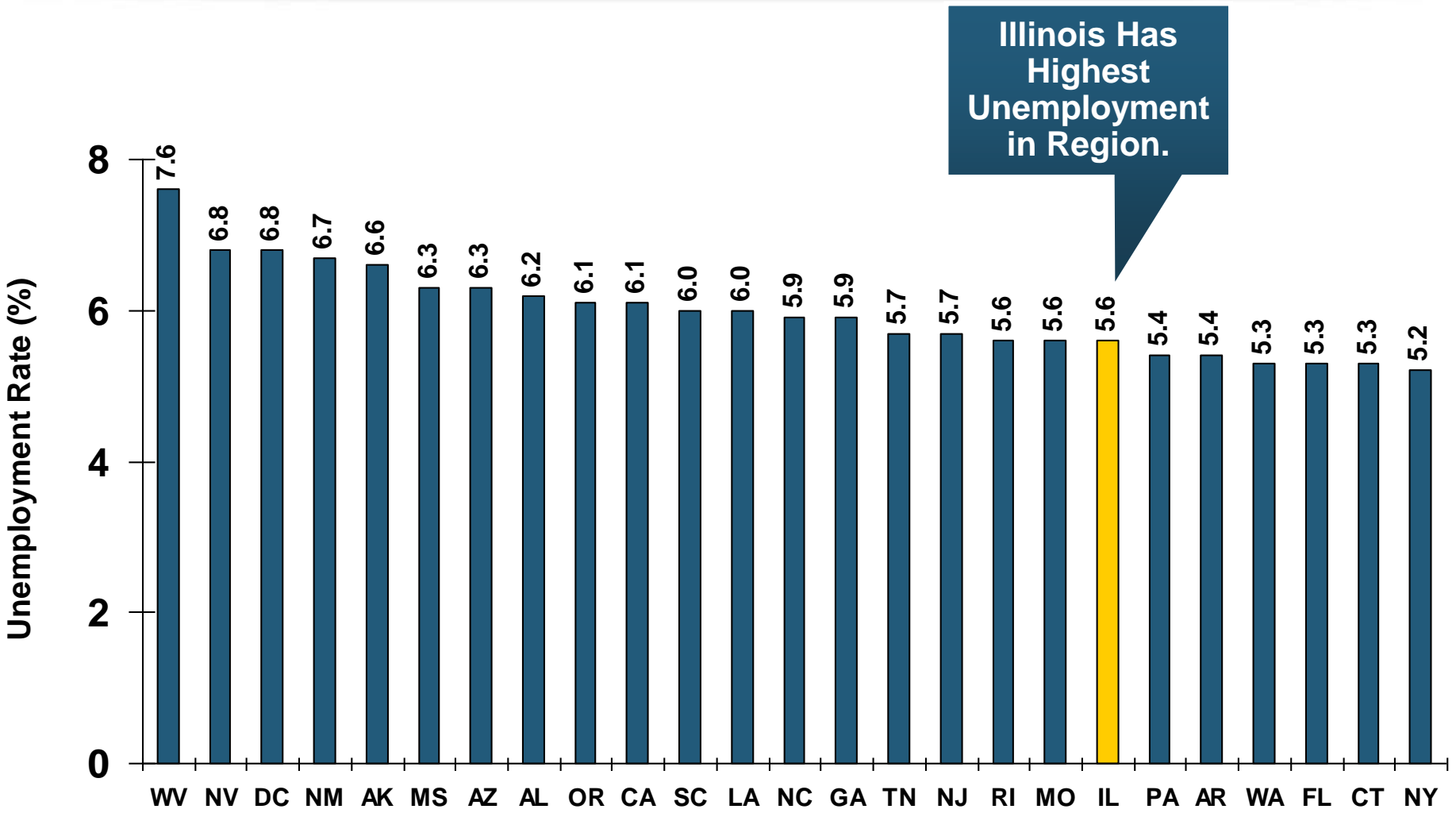
Jobless figures have been revised downwards for 2015/16

Unemployment forecasts have been revised modestly downwards. Optimistic scenarios put the unemployment as low as 5.0% by Q4 of 2015.

\* = actual; = forecasts

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

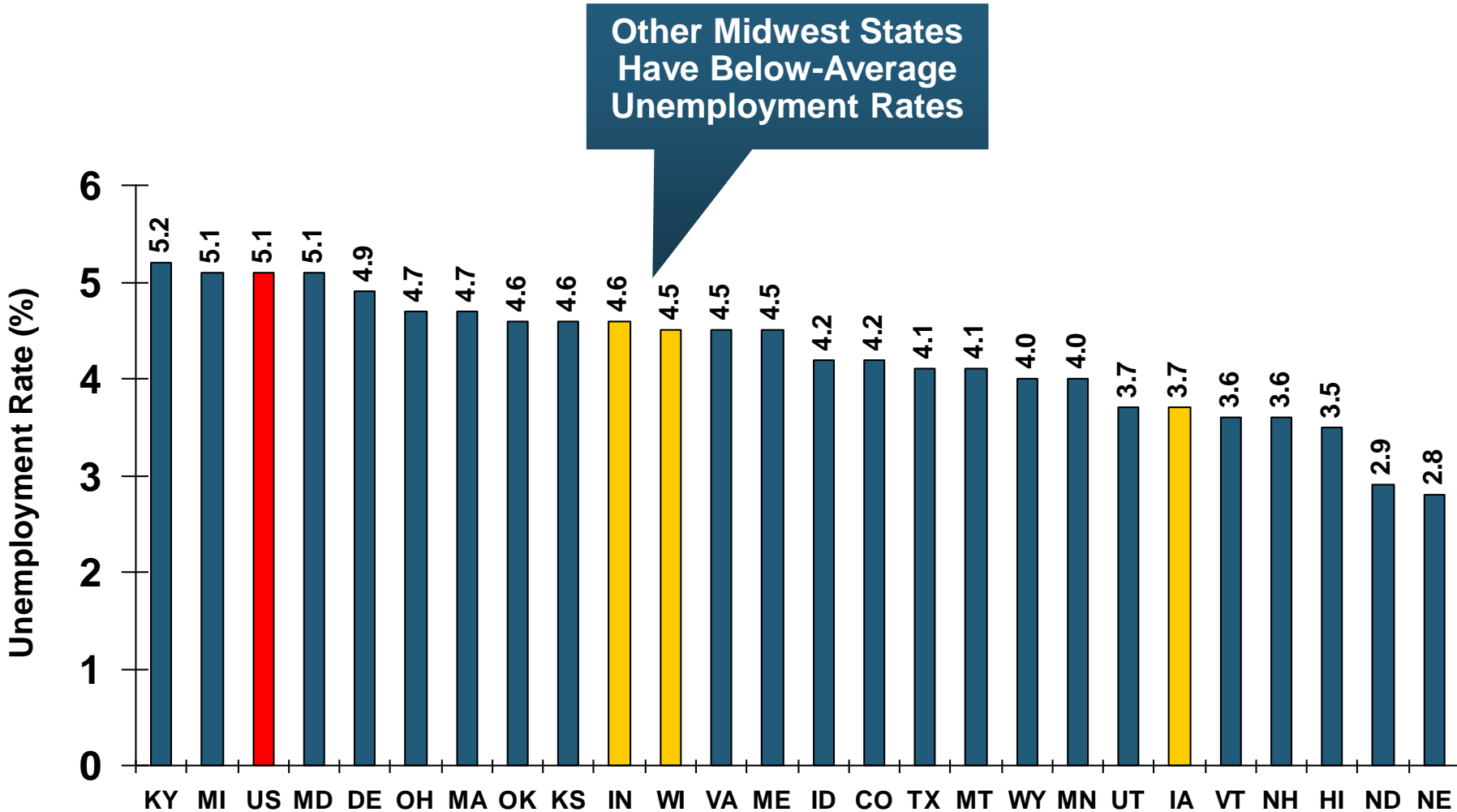
# Unemployment Rates by State, August 2015: Highest States\*



\*Provisional figures for August 2015, seasonally adjusted.

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

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



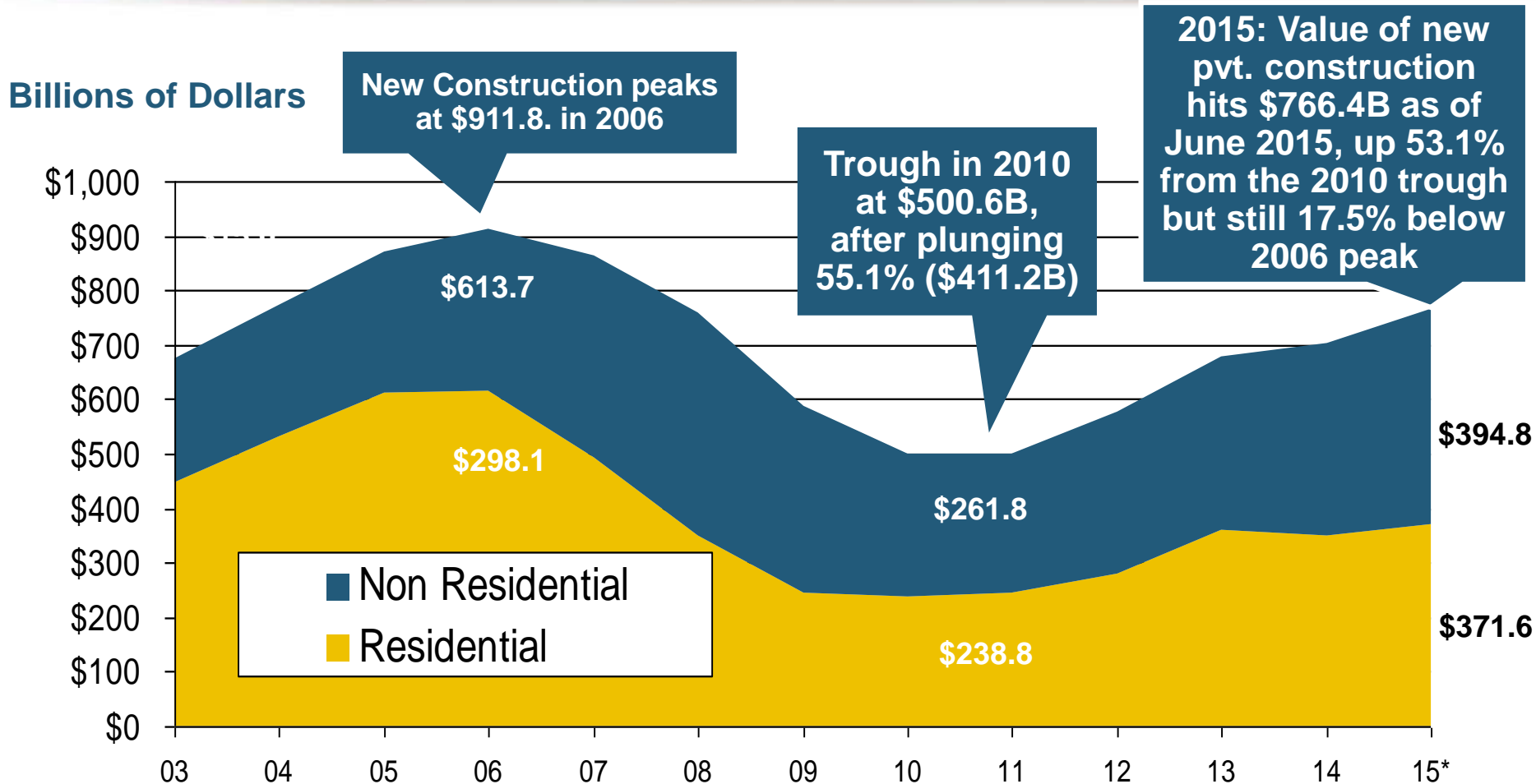
\*Provisional figures for August 2015, seasonally adjusted.  
Sources: US Bureau of Labor Statistics; Insurance Information Institute.



# CONSTRUCTION INDUSTRY OVERVIEW & OUTLOOK

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

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



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

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

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

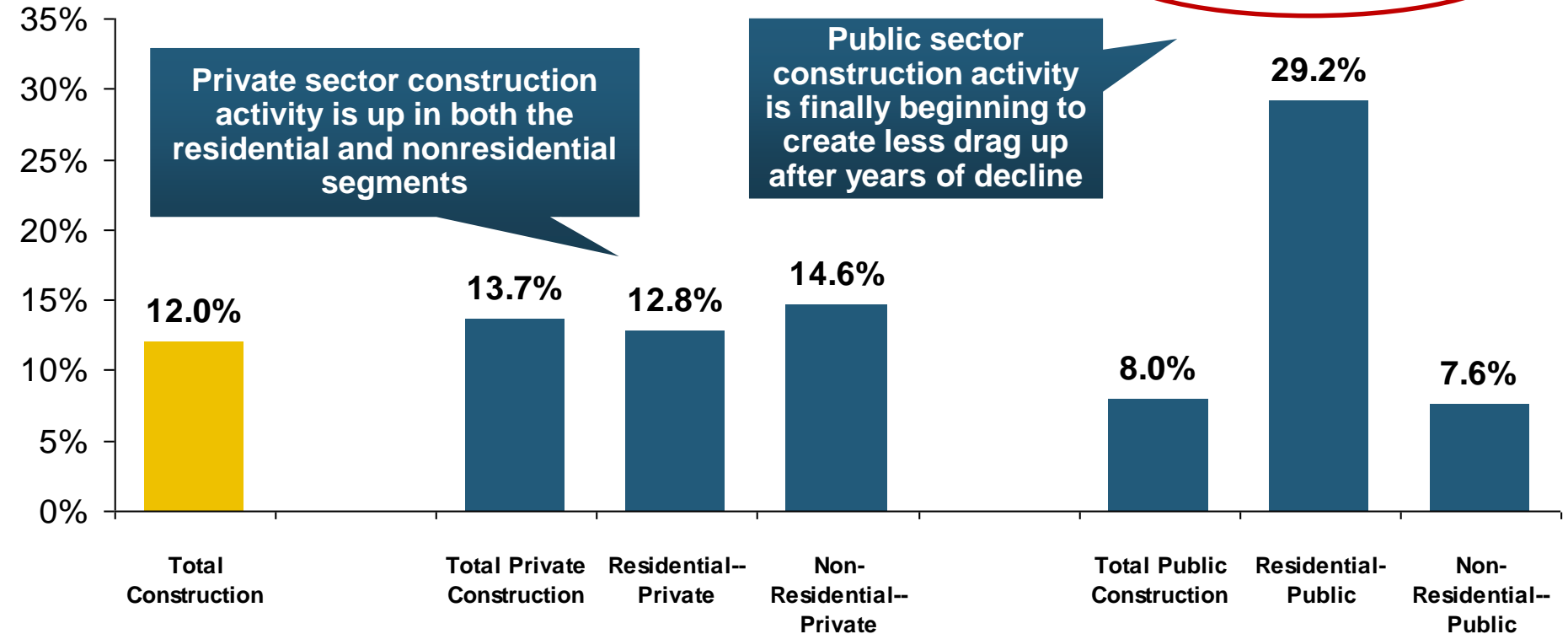


# Value of Construction Put in Place, June 2015 vs. June 2014\*

Growth (%)

**Private: +13.7%**

**Public: +8.0%**



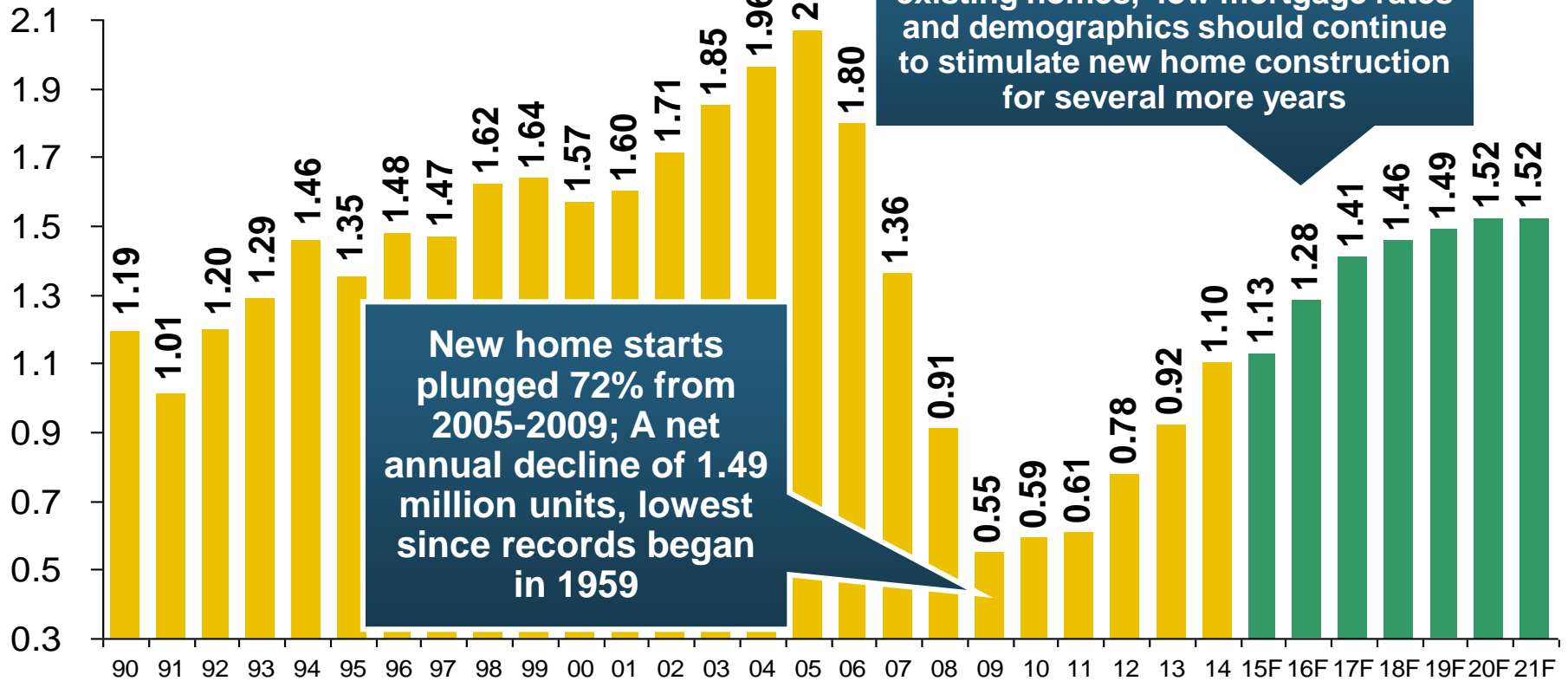
**Overall Construction Activity is Up Again After Languishing in Early 2015; State/Local Sector Government Sector May Be Recovering as Budget Woes Ease in Some Jurisdictions**

\*seasonally adjusted

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

# New Private Housing Starts, 1990-2021F

(Millions of Units)



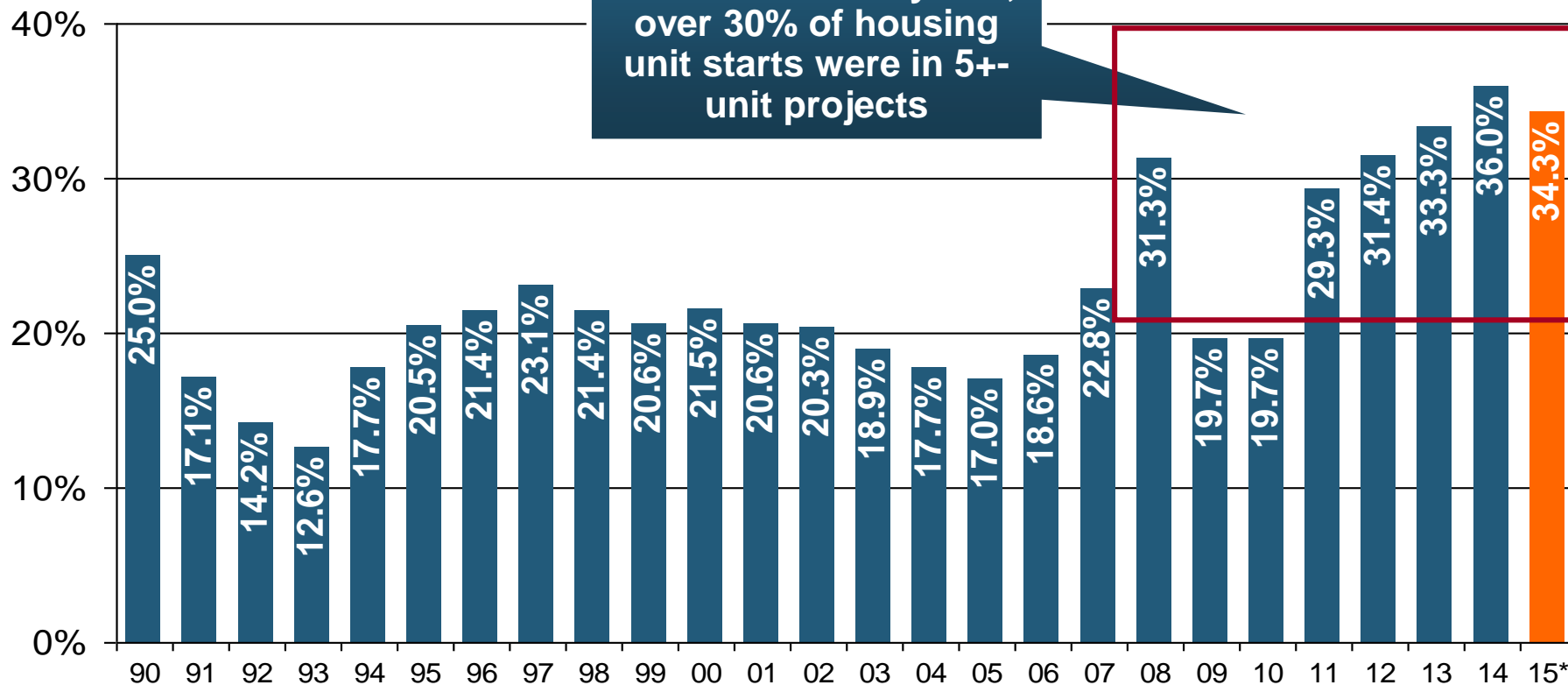
Job growth, low inventories of existing homes, low mortgage rates and demographics should continue to stimulate new home construction for several more years

New home starts plunged 72% from 2005-2009; A net annual decline of 1.49 million units, lowest since records began in 1959

**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



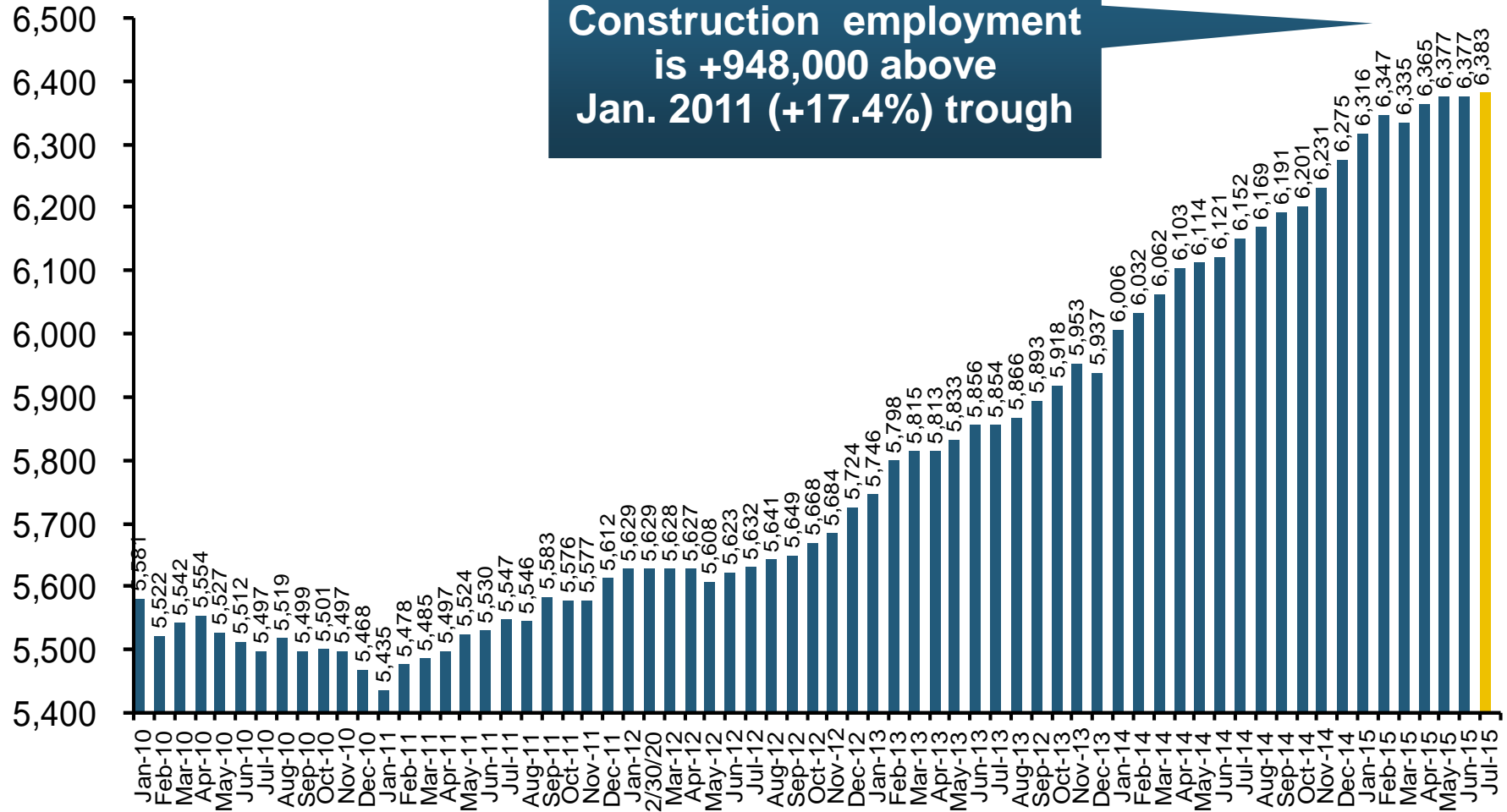
**A NEW NORMAL?**  
In 5 of the last 7 years, over 30% of housing unit starts were in 5+ unit projects

**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.

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

(Thousands)



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

\*Seasonally adjusted.

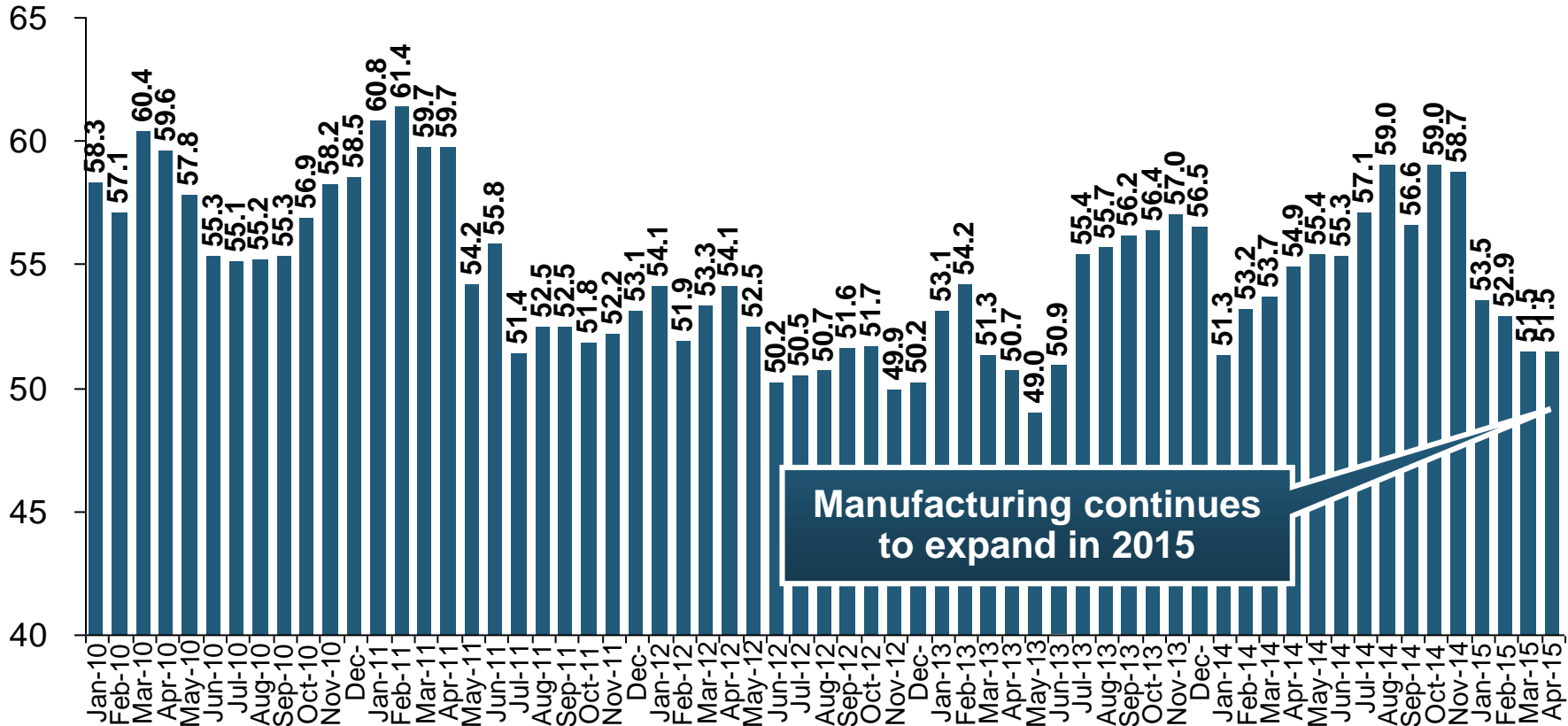
Sources: US Bureau of Labor Statistics at <http://data.bls.gov>; Insurance Information Institute.

# **MANUFACTURING SECTOR OVERVIEW & OUTLOOK**

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

# ISM Manufacturing Index (Values > 50 Indicate Expansion)

January 2010 through April 2015



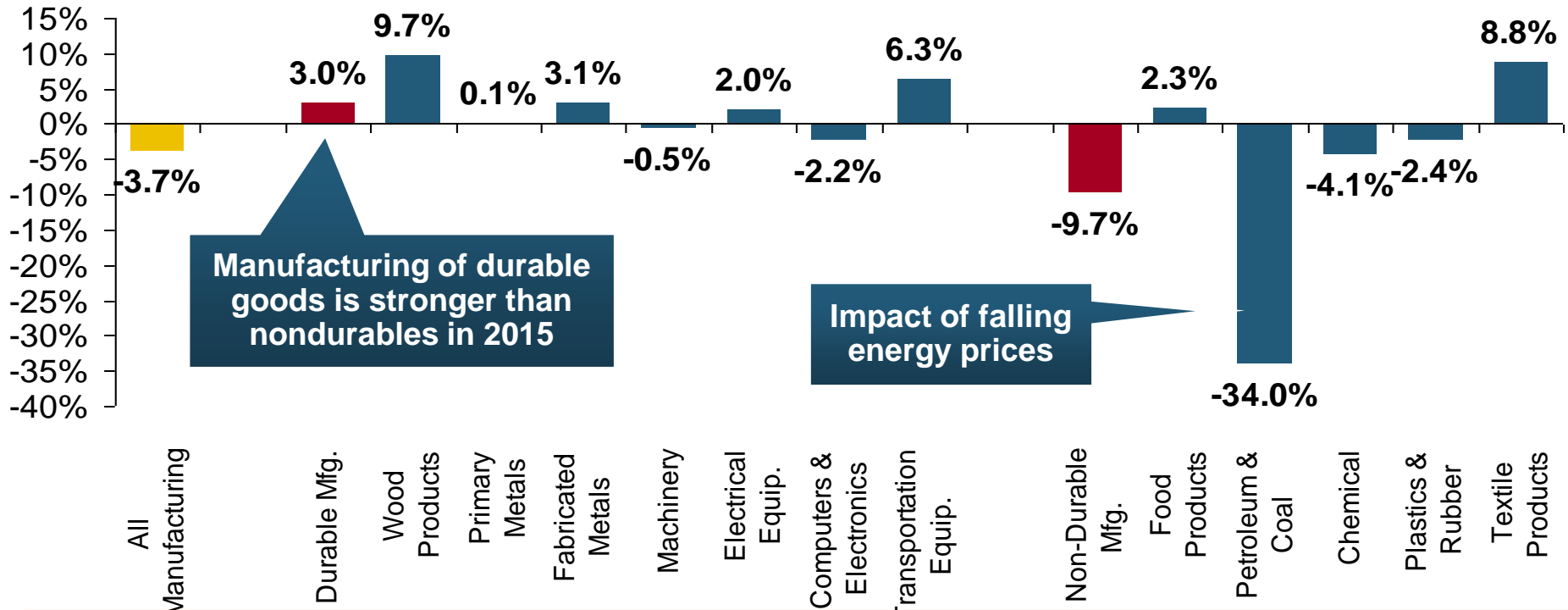
The manufacturing sector expanded for 62 of the 64 months from Jan. 2010 through Apr. 2015. Pace of recovery has been uneven due to economic turbulence in the U.S., Europe and China and the high dollar.

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

Growth (%)

**Durables: +3.0%**

**Non-Durables: -9.7%**

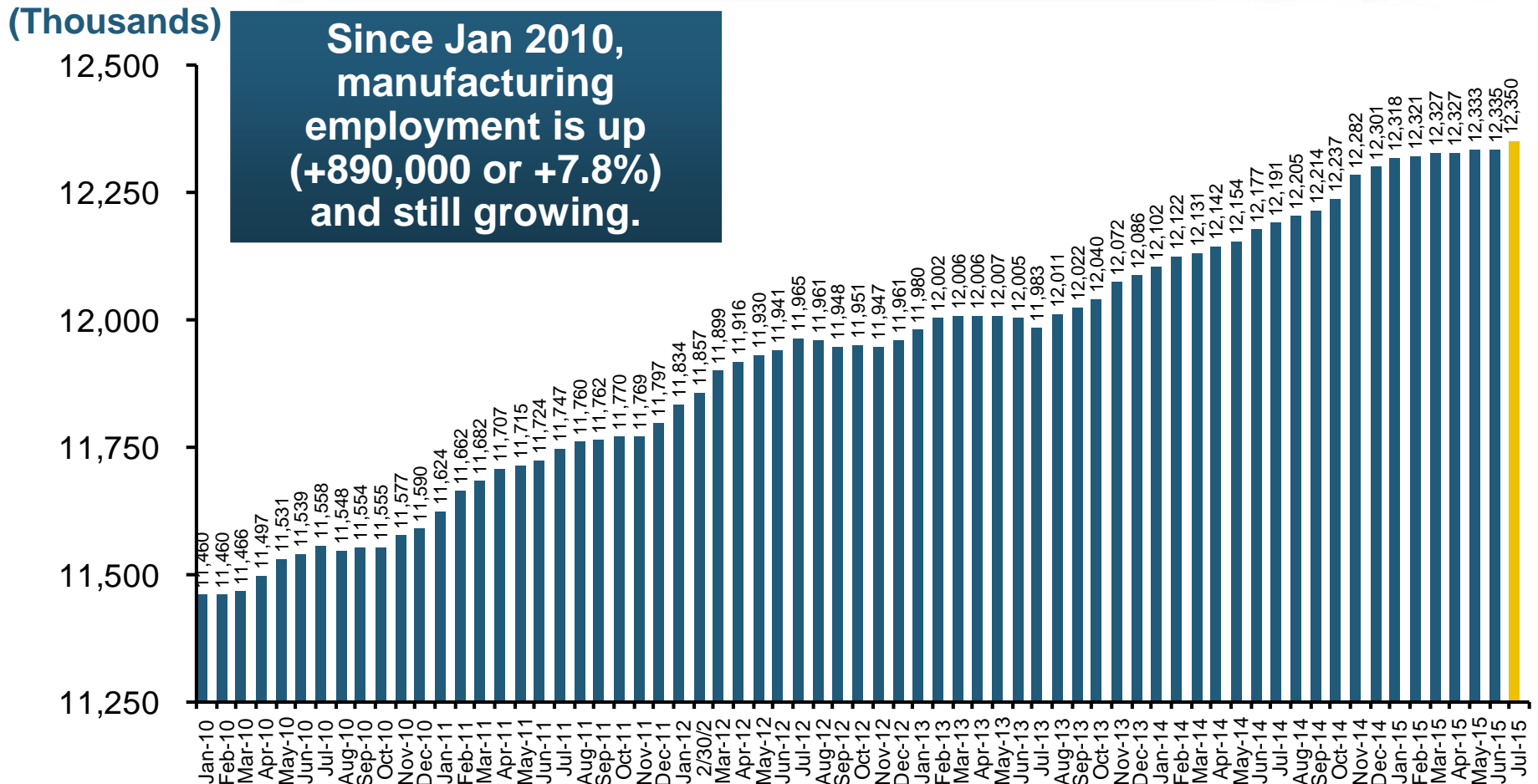


**Manufacturing Is Expanding in Many Sectors But Declining Energy Prices Are Dragging Down Industry Figures. Continued Growth Across a Number of Sectors that Will Contribute to Growth in Insurable Exposures Including: WC, Commercial Property, Commercial Auto and Many Liability Coverages**

\*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/>

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



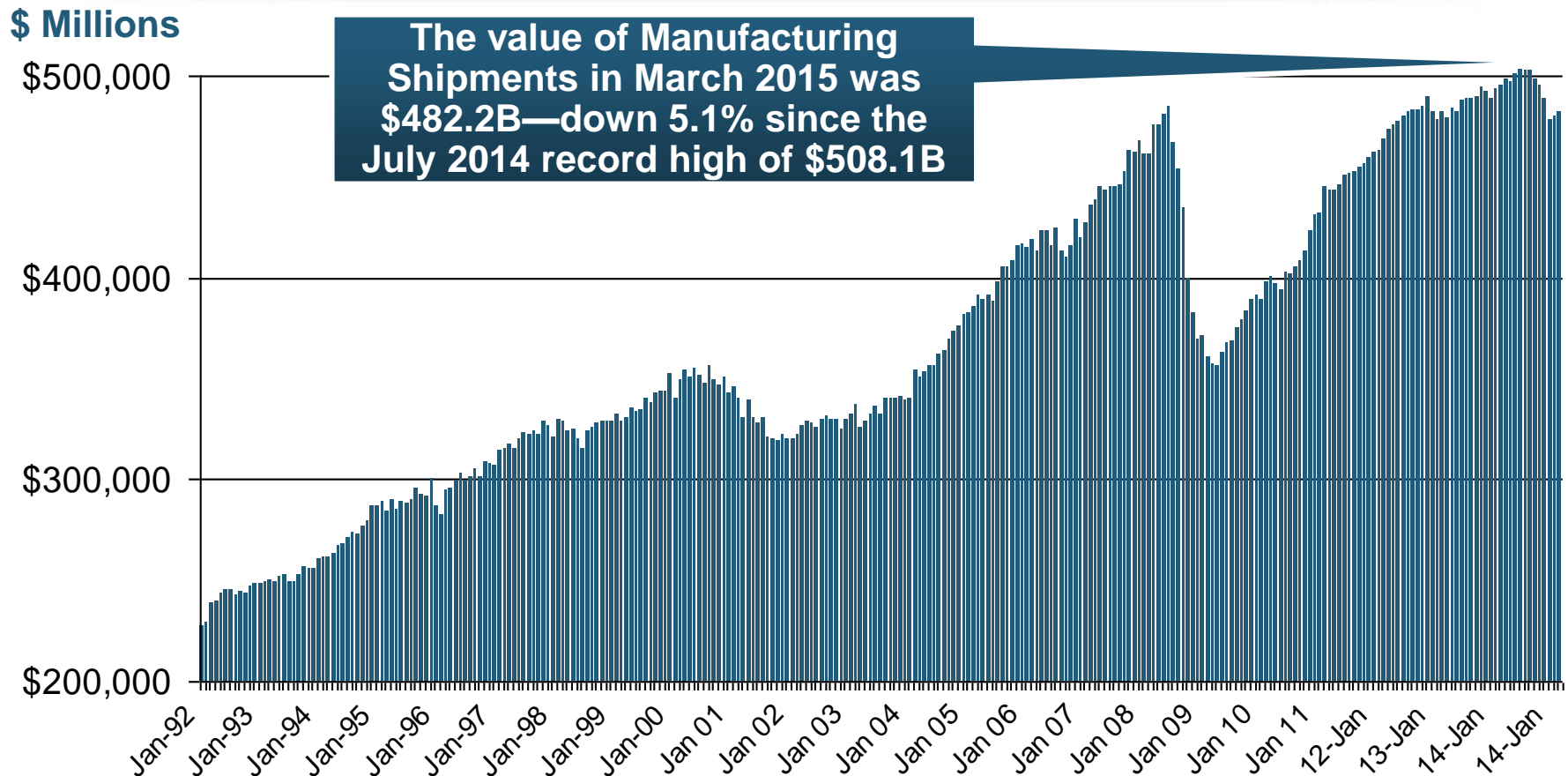
Manufacturing employment is a surprising source of strength in the economy. Employment in the sector is at a multi-year high.

\*Seasonally adjusted.

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



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



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

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

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



# CYBER RISK & CYBER INSURANCE

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

***I.I.I. White Paper to Be Published in Oct.***

# 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.\*

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

# High Profile Data Breaches, 2014-2015

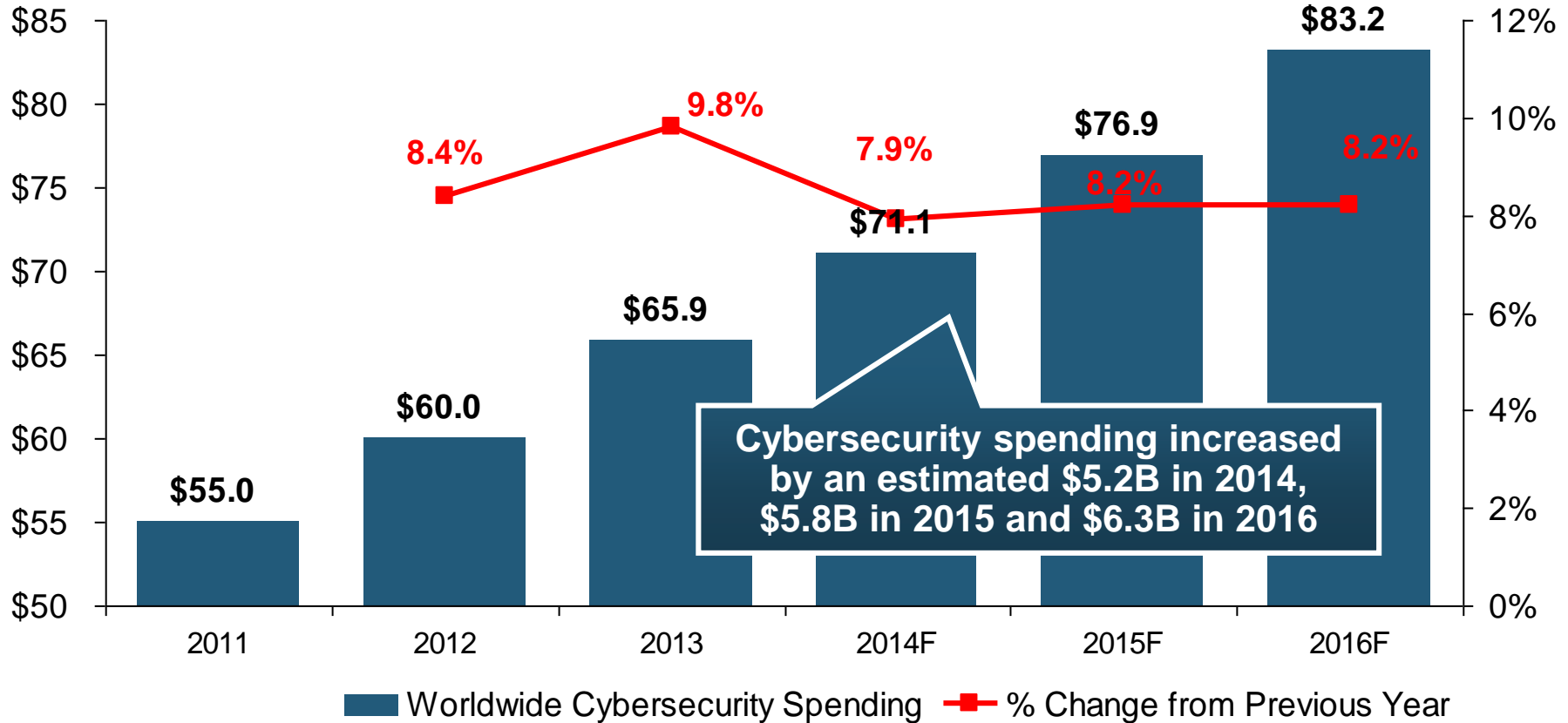


Date	Company	Description of Breach
May 2015	OPM	Hackers broke into U.S. Government Personnel Office stealing personal identifying information of as many as 14 million civilian U.S. government employees.
Mar 2015	Premera Blue Cross	Data breach compromises financial and medical records of 11 million customers.
Feb 2015	Anthem, Inc	Massive data breach after hackers gained access to corporate data base containing personal information of as many as 80 million current and former U.S. customers and employees.
Dec 2014	Sony Pictures Entertainment	Hacker break-in involving theft of unreleased motion pictures, and theft of more than 25 gigabytes of sensitive data on tens of thousands of Sony employees, including social security numbers, medical and salary information.
Nov 2014	Staples	Point-of-sale (POS) malware attack and breach exposing customer data, and resulting in compromise of 1.2 million records.
Sept 2014	Home Depot	Huge data breach exposes 56 million credit and debit cards and 53 million email addresses.
Aug 2014	Community Health Systems	Cyber attack originating in China resulted in data breach, compromising 4.5 million patient records. Hackers broke into company's computer system by exploiting Heartbleed bug.
June/July 2014	JP Morgan Chase	Massive data breach compromised data associated with 76 million household and 7 million small business accounts. Hackers obtained personal identifying 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

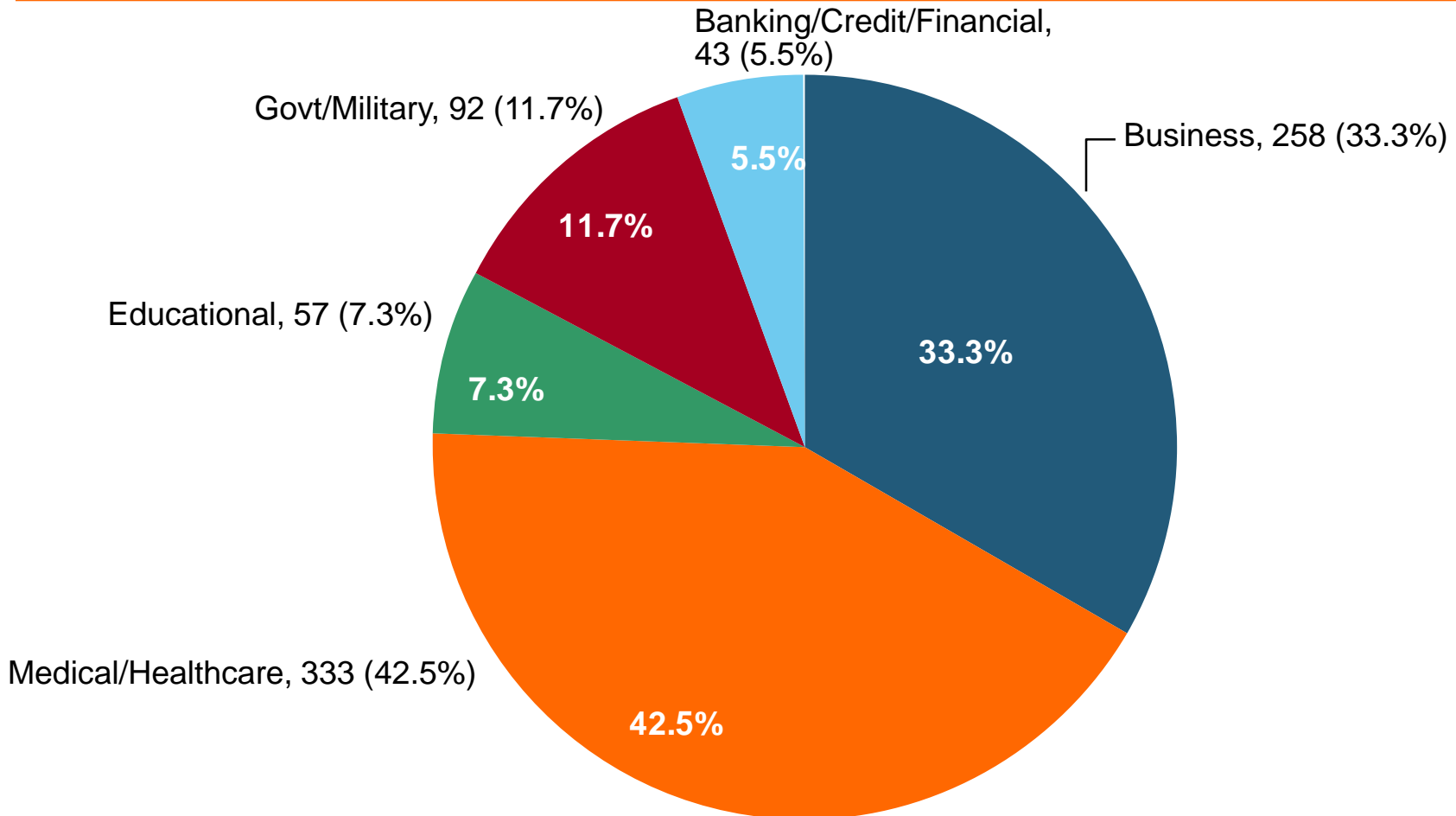
(\$ Billions)



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

# 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:

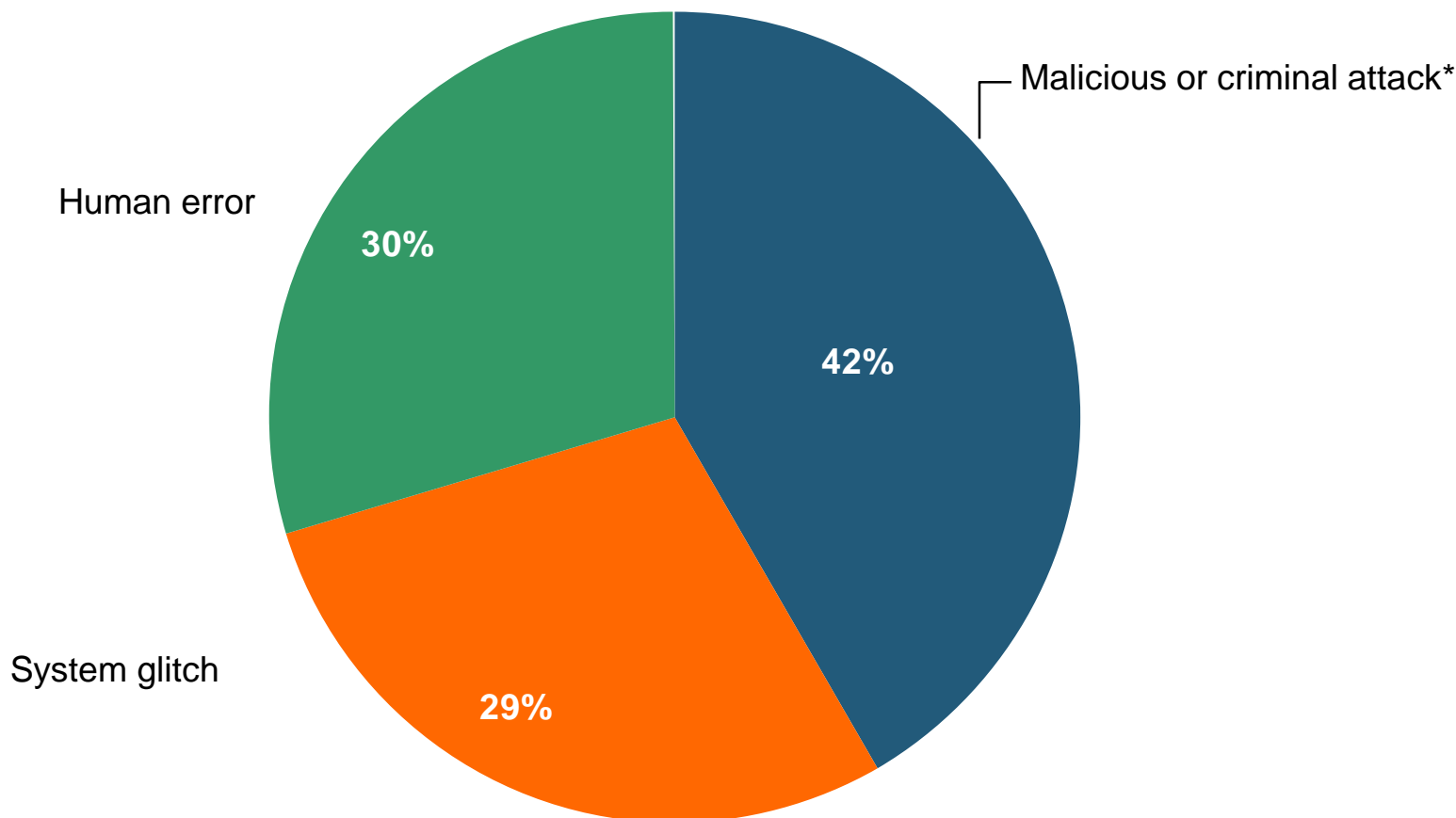
- Easy access to sensitive information
- Difficult to detect

## 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).



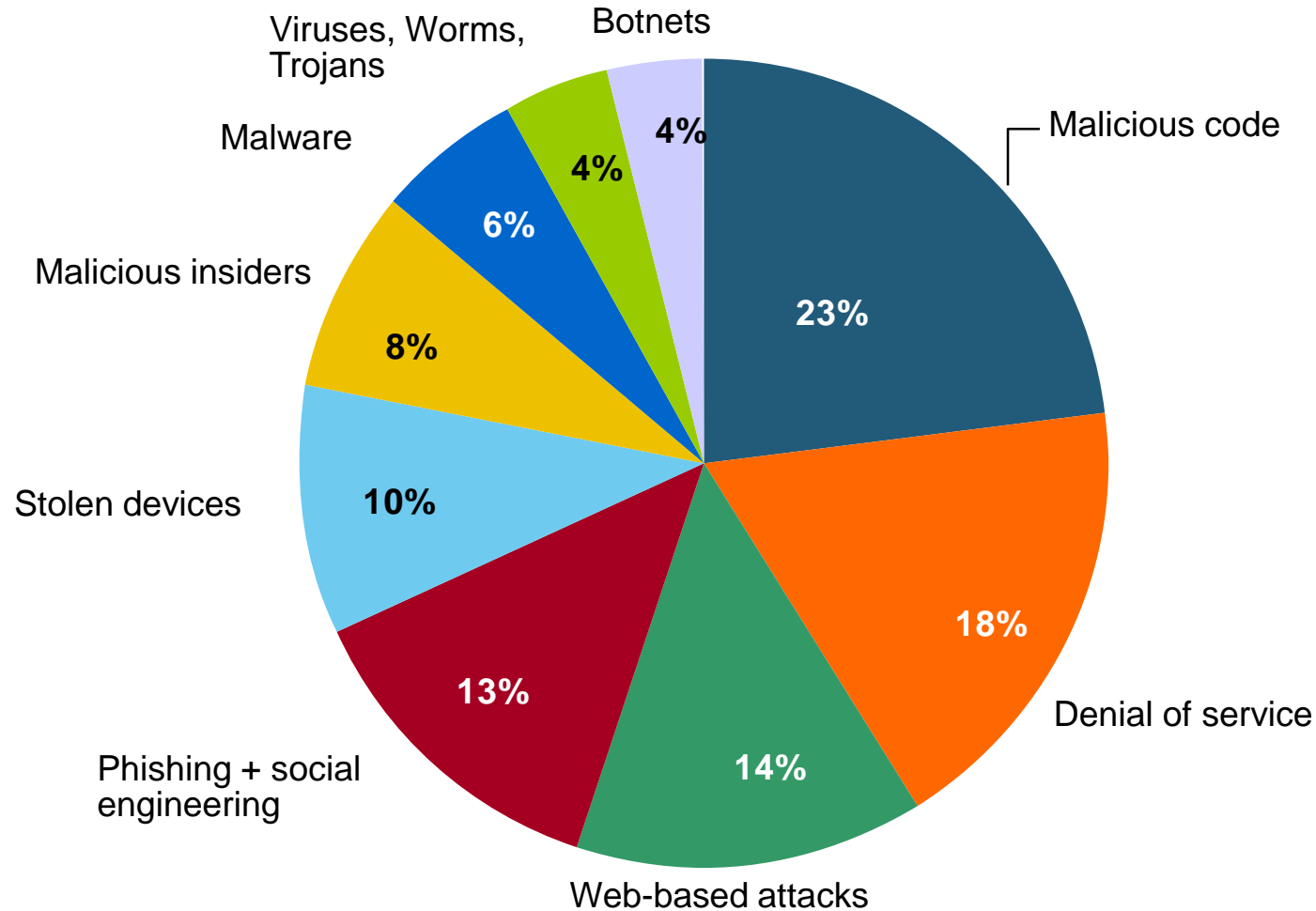
\*The most common types of malicious or criminal attacks include malware infections, criminal insiders, phishing/social engineering and SQL injection.

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



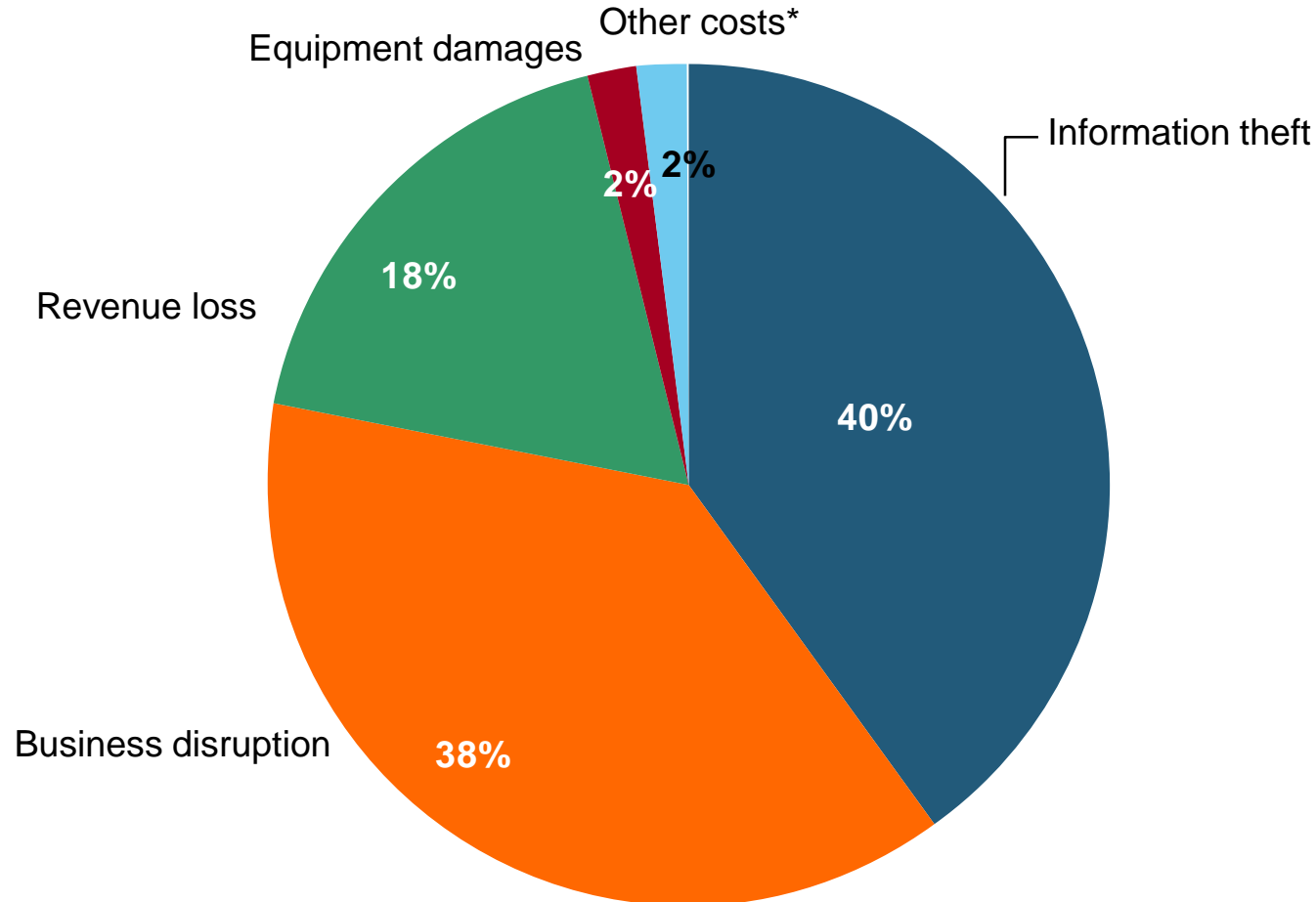
# US: Most Costly Types of Cyber Crimes, Fiscal Year 2014

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

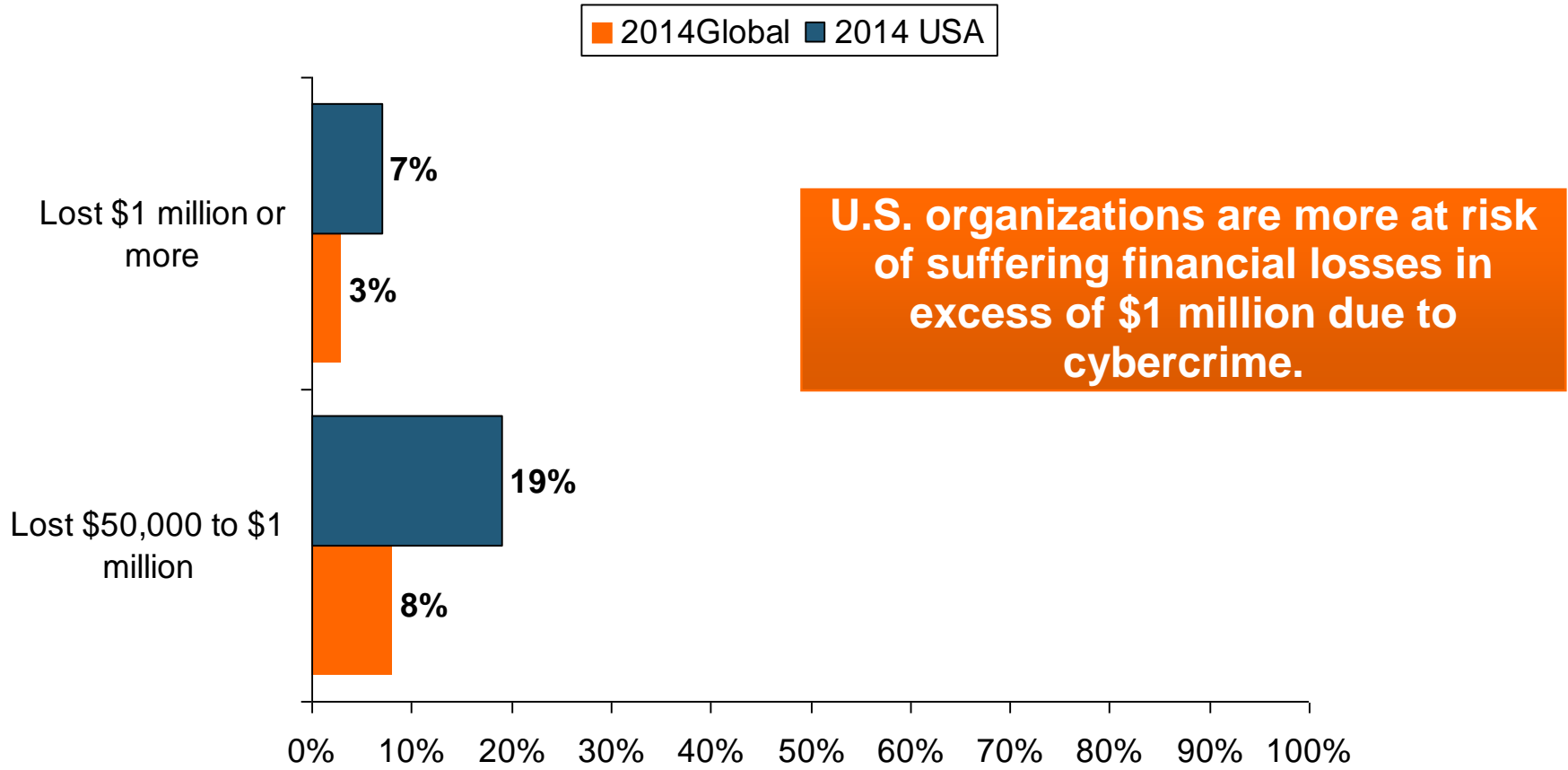
Information theft (40%) and business disruption or lost productivity (38%) account for the majority of external costs due to cyber crime.



\* 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.

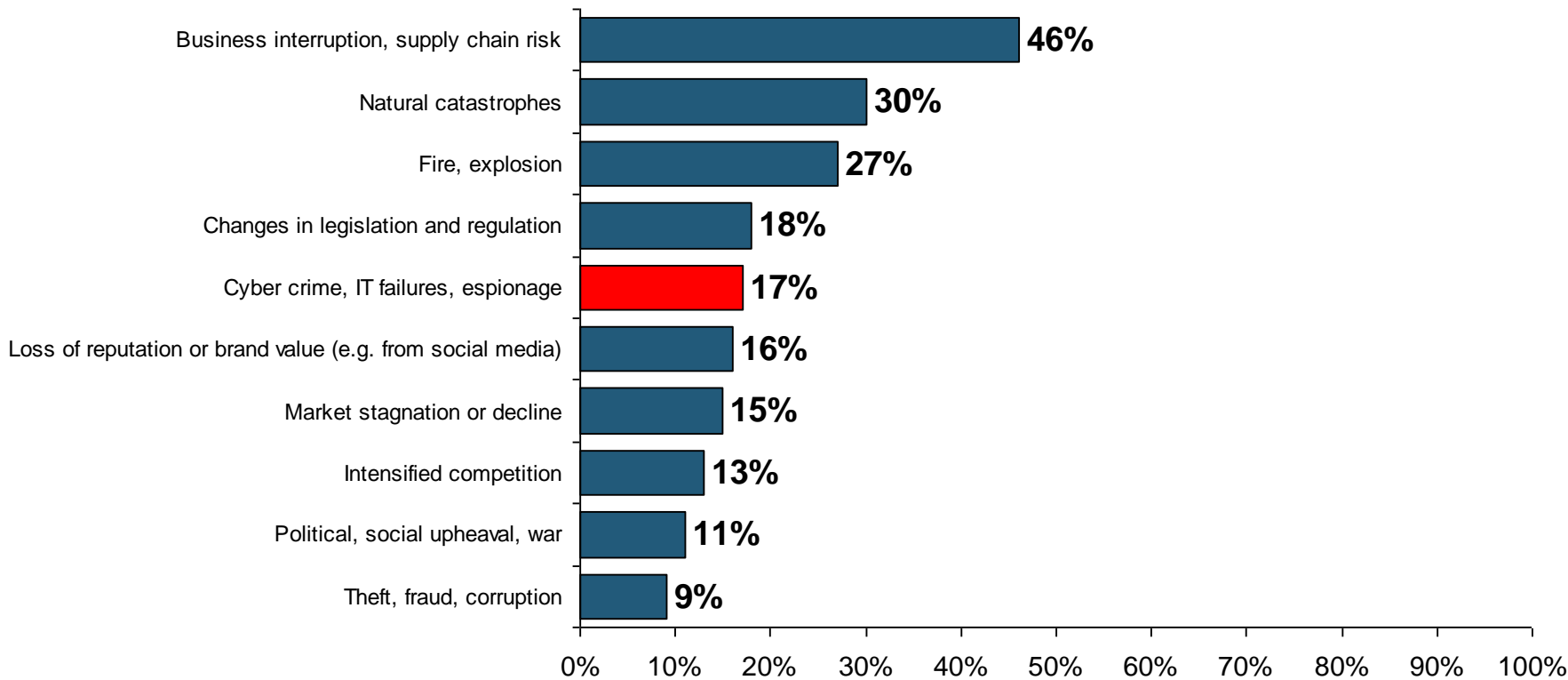
# PWC Survey: Cybercrime Costs Greater for U.S. Companies



Source: 2014 Global Economic Crime Survey, PWC.

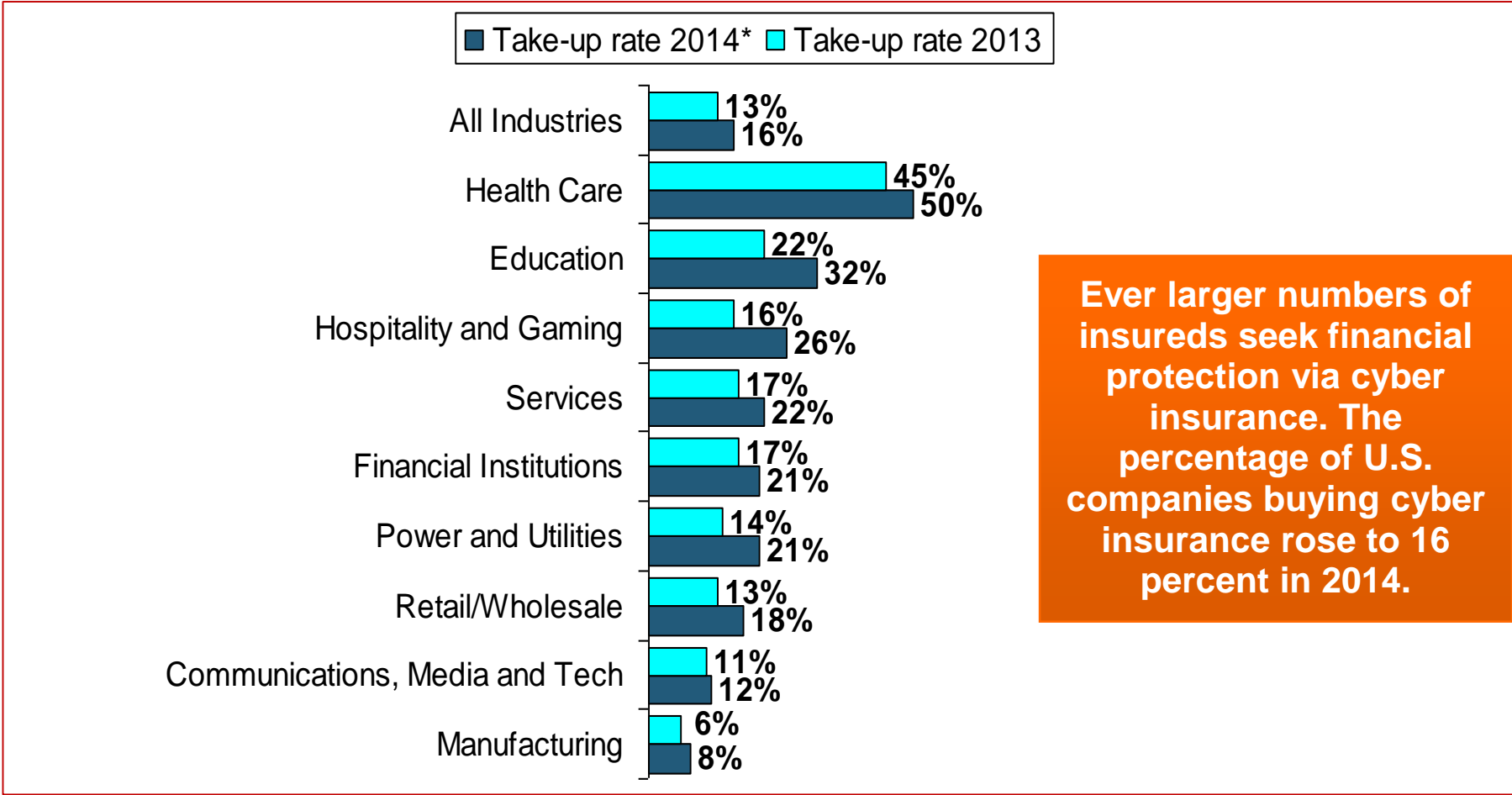
# Top 10 Global Business Risks for 2015

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

# 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.**

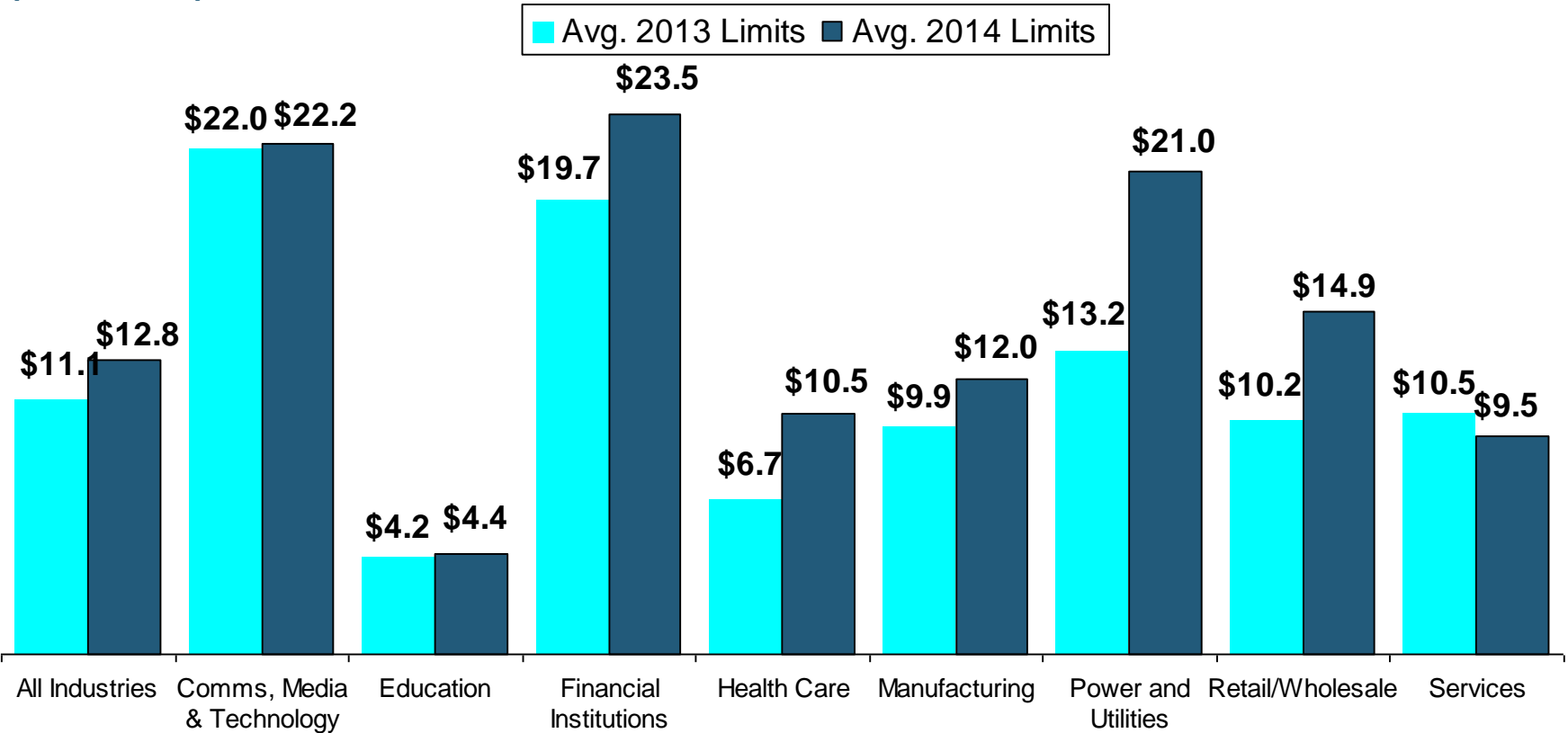
\*Take-up rate refers to the overall percentage of clients that purchased standalone cyber insurance.

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)



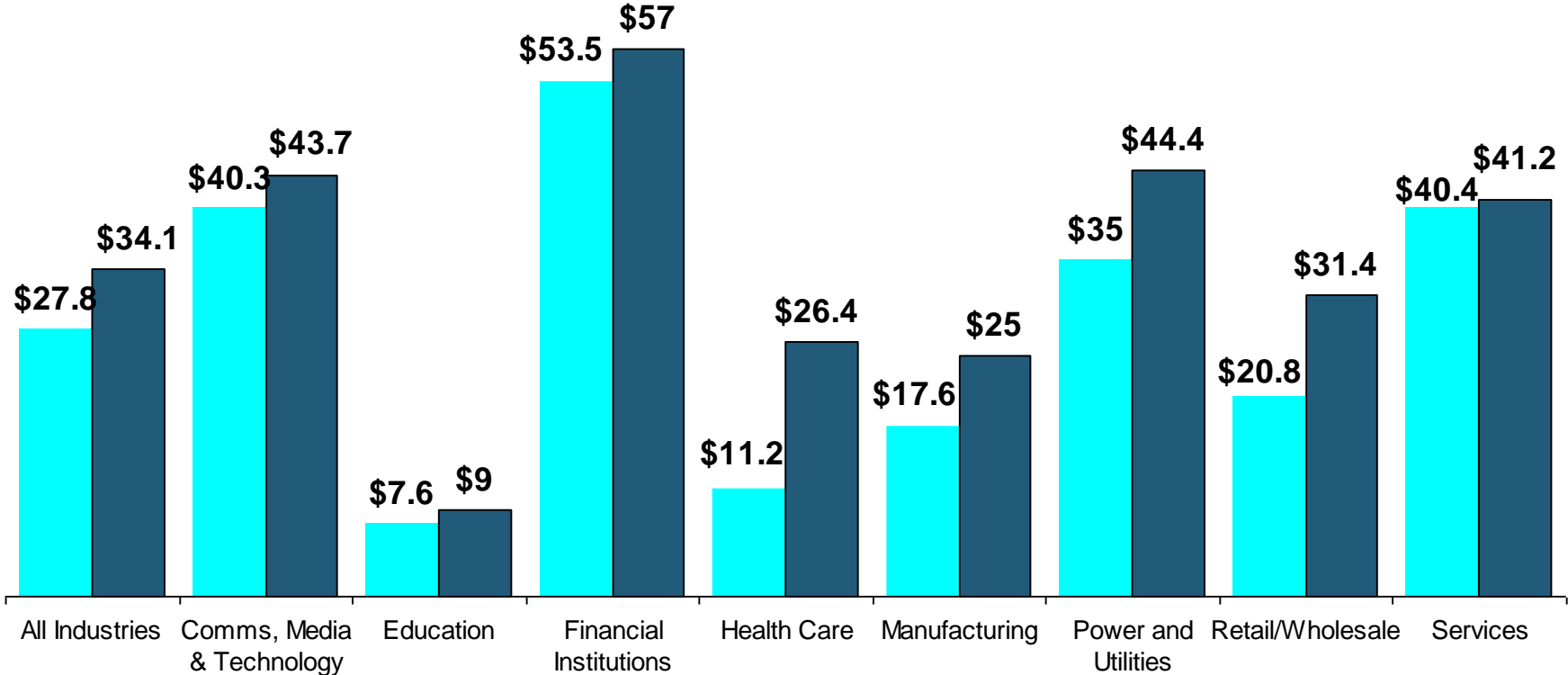
Source: *Benchmarking Trends: As Cyber Concerns Broaden, Insurance Purchases Rise*, Marsh Risk Management Research Briefing, March 2015

# 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.

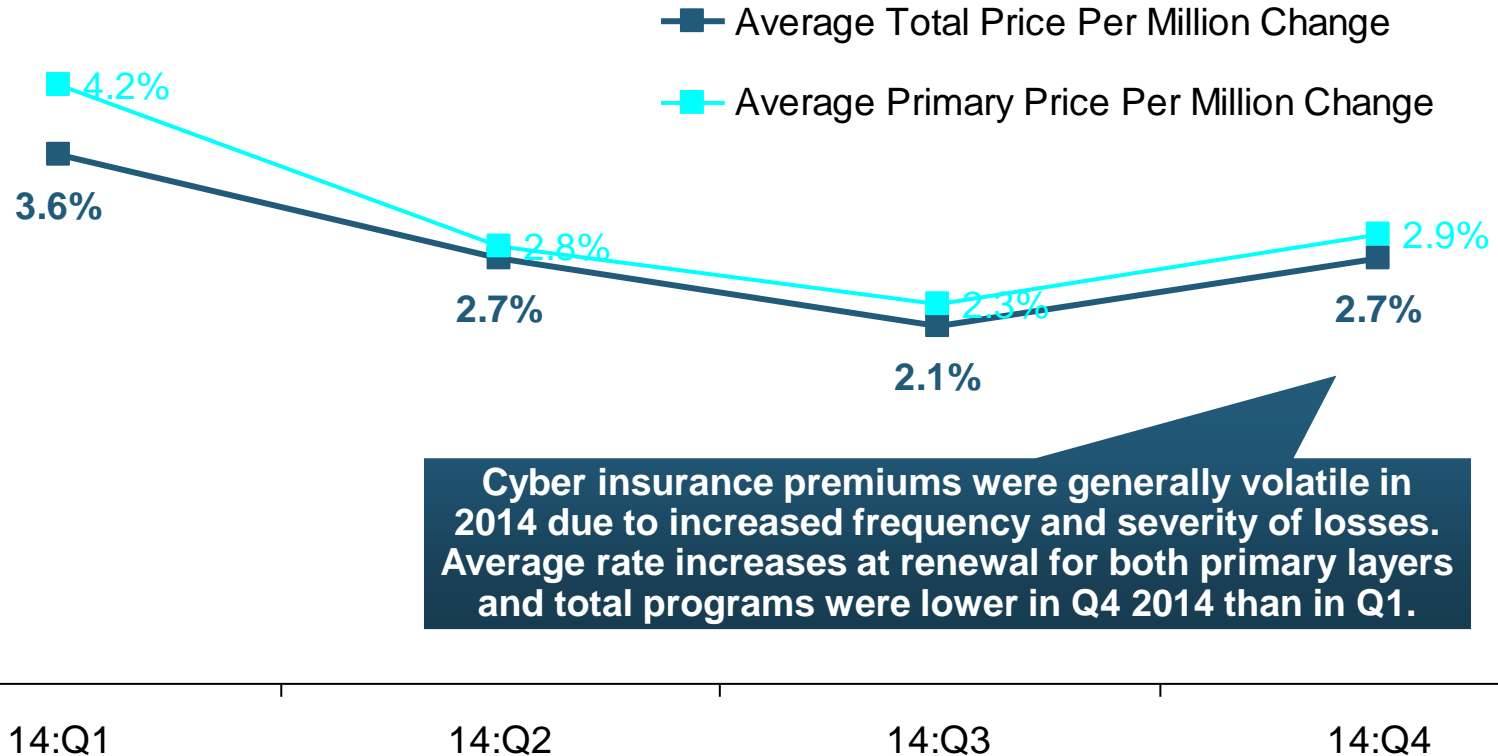
(\$ Millions)

■ Avg. 2013 Limits ■ Avg. 2014 Limits



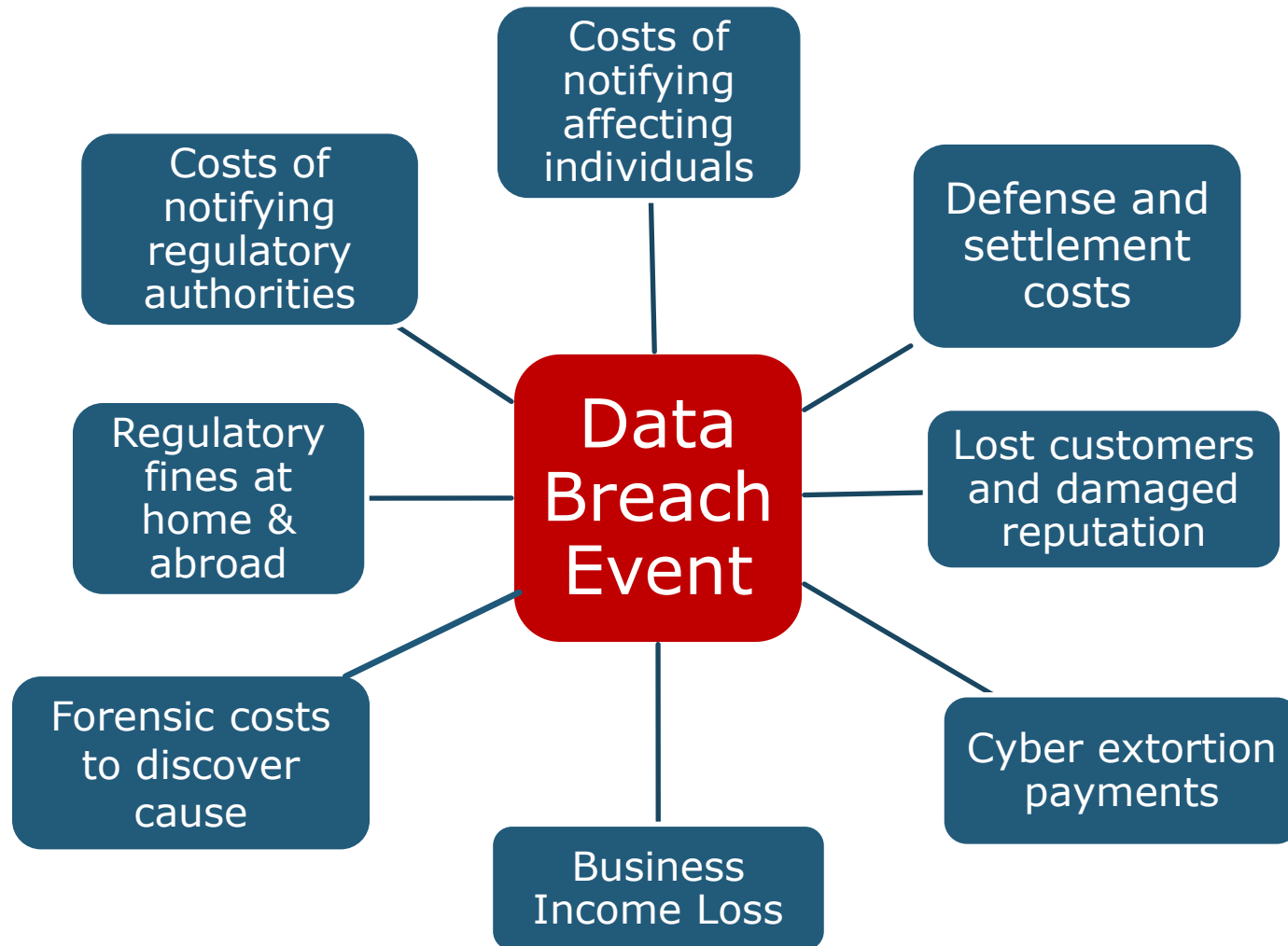
Source: *Benchmarking Trends: As Cyber Concerns Broaden, Insurance Purchases Rise*, Marsh Risk Management Research Briefing, March 2015

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

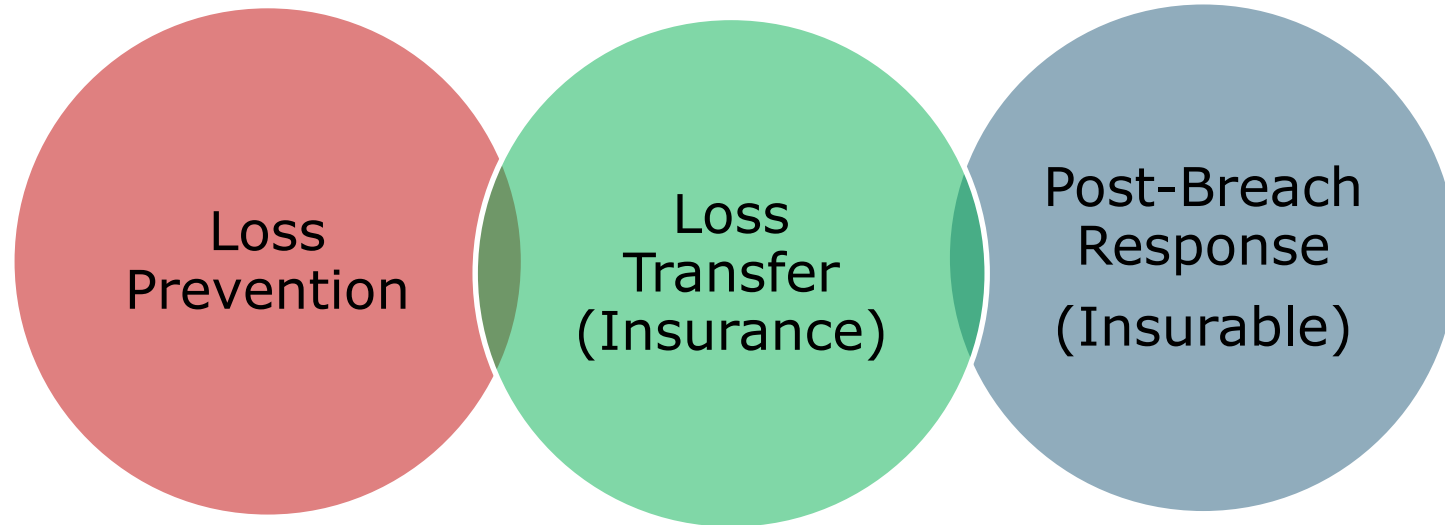




# Data/Privacy Breach: Many Potential Costs Can Be Insured



# 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. Will Release its Third Cyber Report in 2015: *Cyber Risks Threat and Opportunity*



- I.I.I.'s 3<sup>rd</sup> report on cyber risk scheduled for Q3 2015
- 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

# INDUSTRY DISRUPTORS

**Technology, Society and  
the Economy Are All  
Changing at a Rapid Pace**

***Thoughts on the Future***



# Technology and Insurance

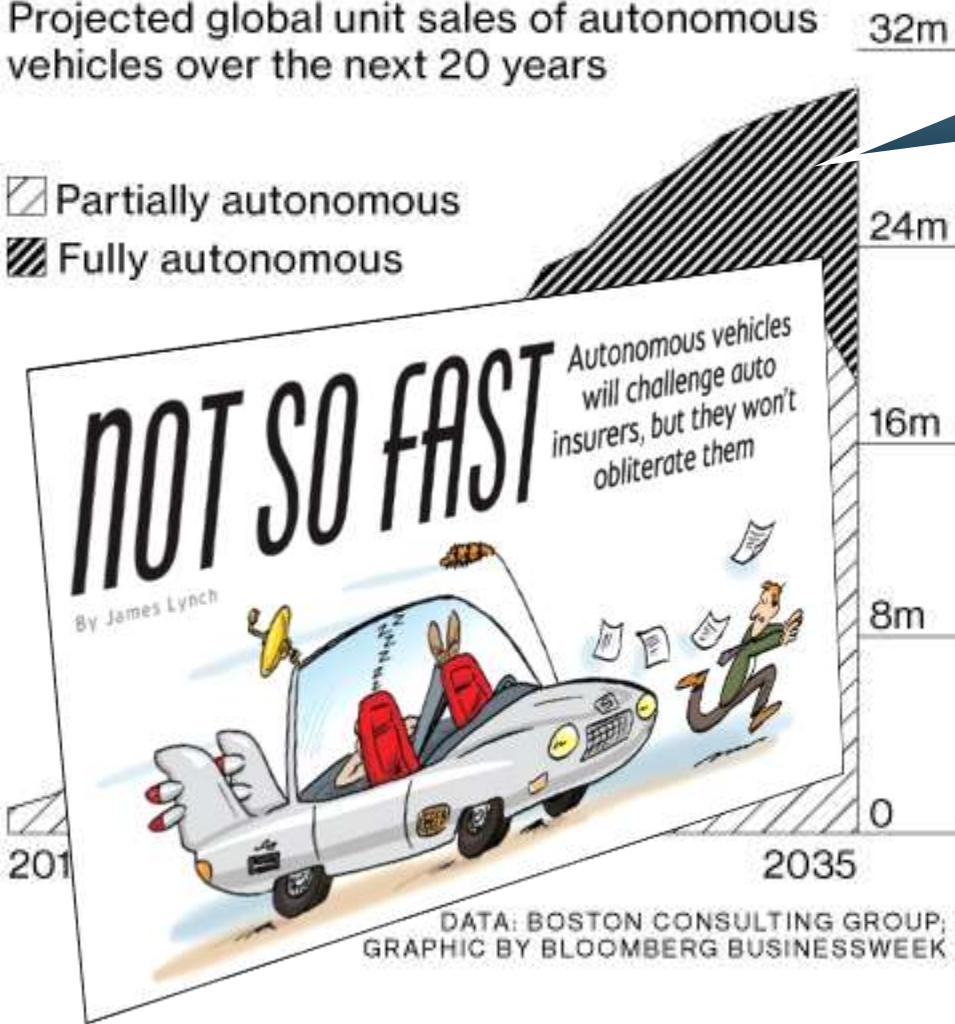
**Rapid Technological Innovations Are  
Impacting Many Segments of the  
P/C Insurance Industry**

# 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?

DATA: BOSTON CONSULTING GROUP; GRAPHIC BY BLOOMBERG BUSINESSWEEK

Source: Boston Consulting Group.

# 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**

# 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
  - ◆ Workers Comp
- Many unanswered insurance questions
- Insurance solutions are increasingly available to fill the many insurance gaps that arise



U B E R





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

Will YOUR job be reduced to an app?



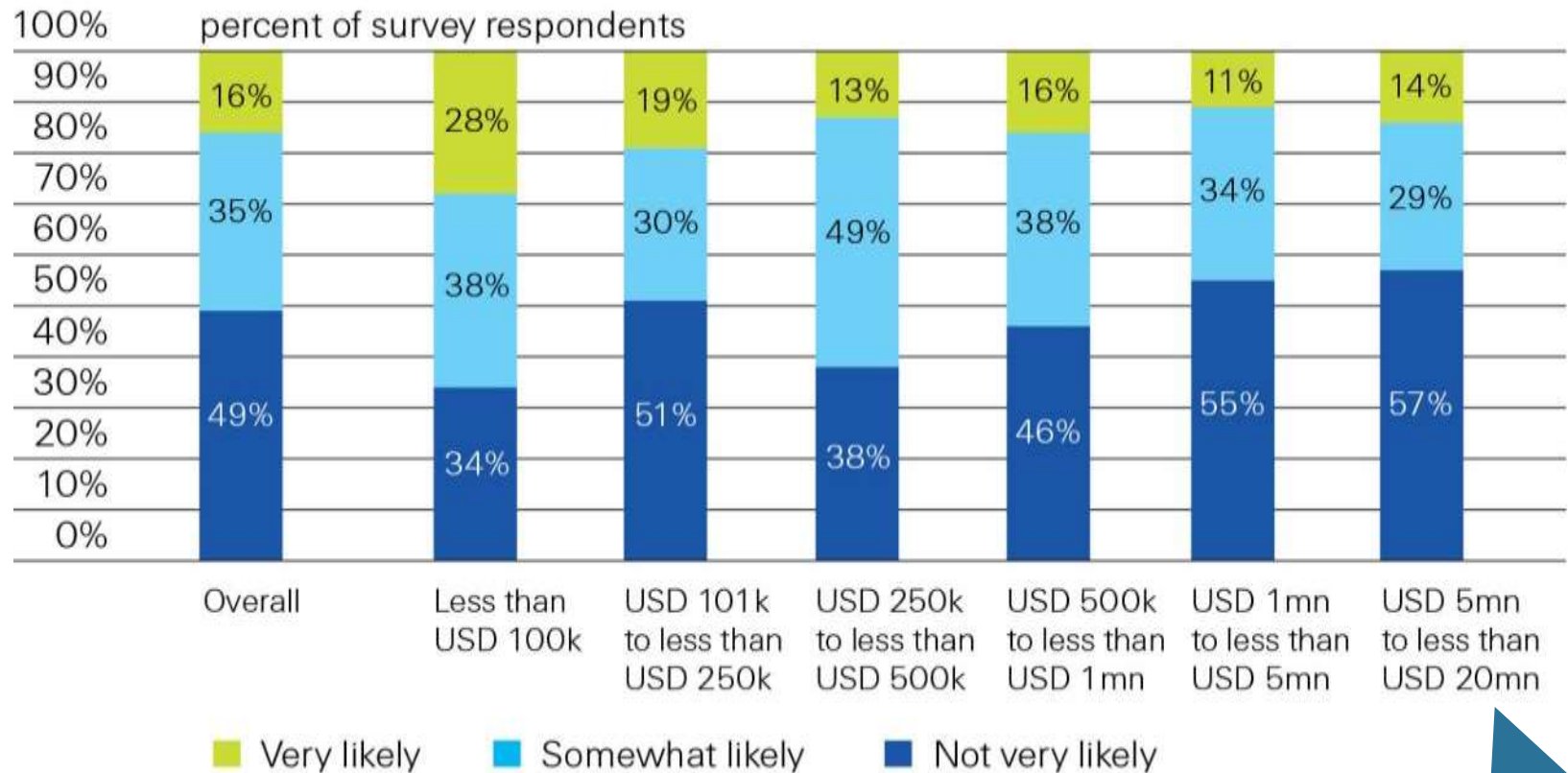
# Send in the Drones: Potential Rapid Adoption in Industry; Media Loves It



- Drones or Unmanned Aerial Vehicle (UAV) technology is seeing rapid adoption rate in many industries, including insurance
- FAA granting Section 333 exemptions for commercial use and testing of UAS
- 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)



# Proportion of Businesses Interested in Buying Insurance Online



**Interest diminishes with account size**

Likelihood of small US businesses buying insurance online directly from the insurer, overall and by annual company revenue, in 2013

Source: Swiss Re from "Voice of the Small Commercial Insurance Consumer Survey." Deloitte, March (2013)

- **2015 Appears Profitable for P/C Industry (So Far)**
- **Low Interest Rates are Here for a While . . .**
- **. . . So Underwriting Profits Are Key to Overall Profitability**
- **Frequency/Severity Appear to Be Rising, Counter to Recent Trends**
- **Midwest Results Mirror National Trends**
- **Region's Economic Outlook Improving**
- **Disruptors Create Opportunities for Future**

Insurance Information Institute Online:

[www.iii.org](http://www.iii.org)

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and your attention!*

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