Trends, Challenges and Opportunities in Personal Lines Insurance in 2016 & Beyond

Farm Bureau Managers Conference
New Orleans, LA
June 7, 2016

Download at www.iii.org/presentations

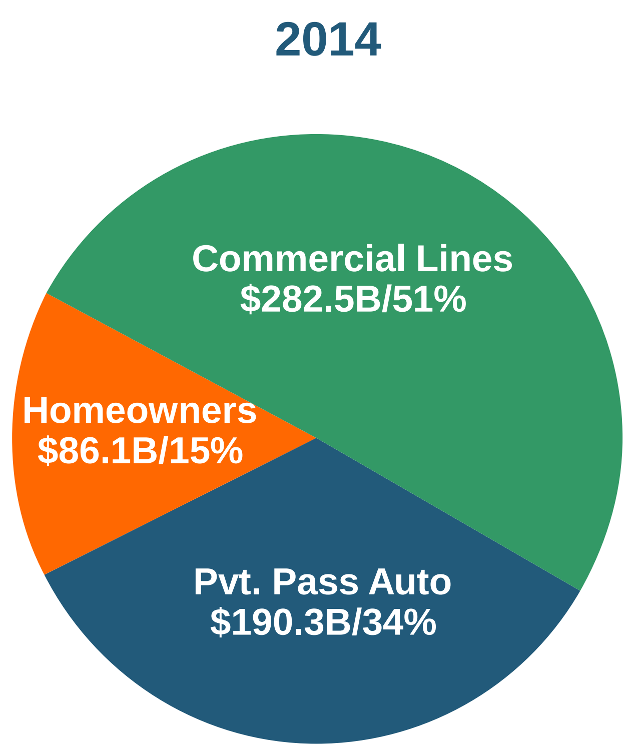
Robert P. Hartwig, Ph.D., CPCU, President & Economist
Insurance Information Institute ♦ 110 William Street ♦ New York, NY 10038
Tel: 212.346.5520 ♦ Cell: 917.453.1885 ♦ bobh@iii.org ♦ www.iii.org

Distribution of Direct Premiums Written by Segment/Line, 2014

INSURANCE INFORMATION INSTITUTE

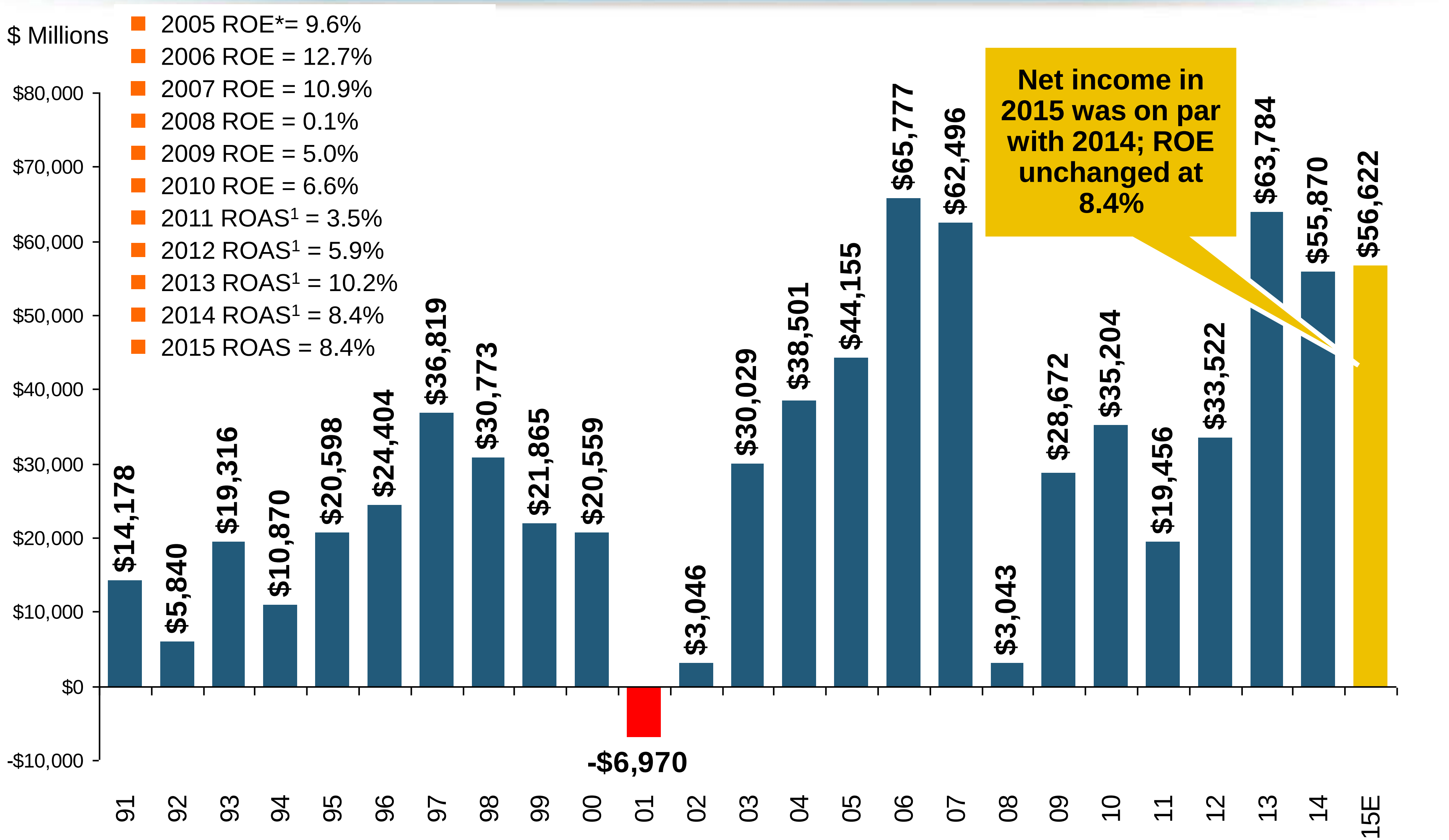
Distribution Facts

- 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



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

P/C Industry Net Income After Taxes 1991–2015

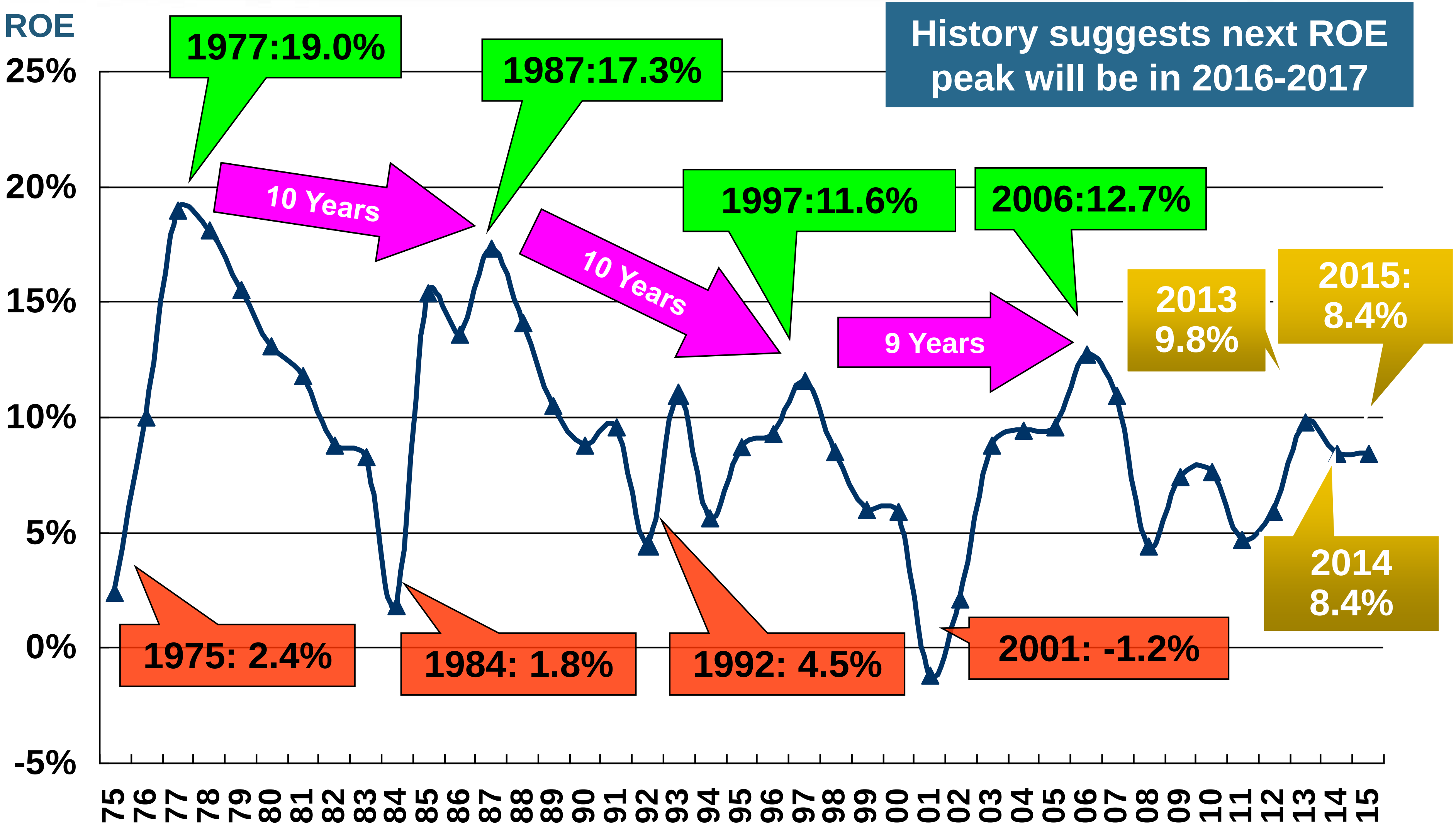


•ROE figures are GAAP; [1]Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 8.2% ROAS in 2014, 9.8% ROAS in 2013, 6.2% ROAS in 2012, 4.7% ROAS for 2011, 7.6% for 2010 and 7.4% for 2009; 2015E is annualized figure based actual figure through Q3 of $44.0

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

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

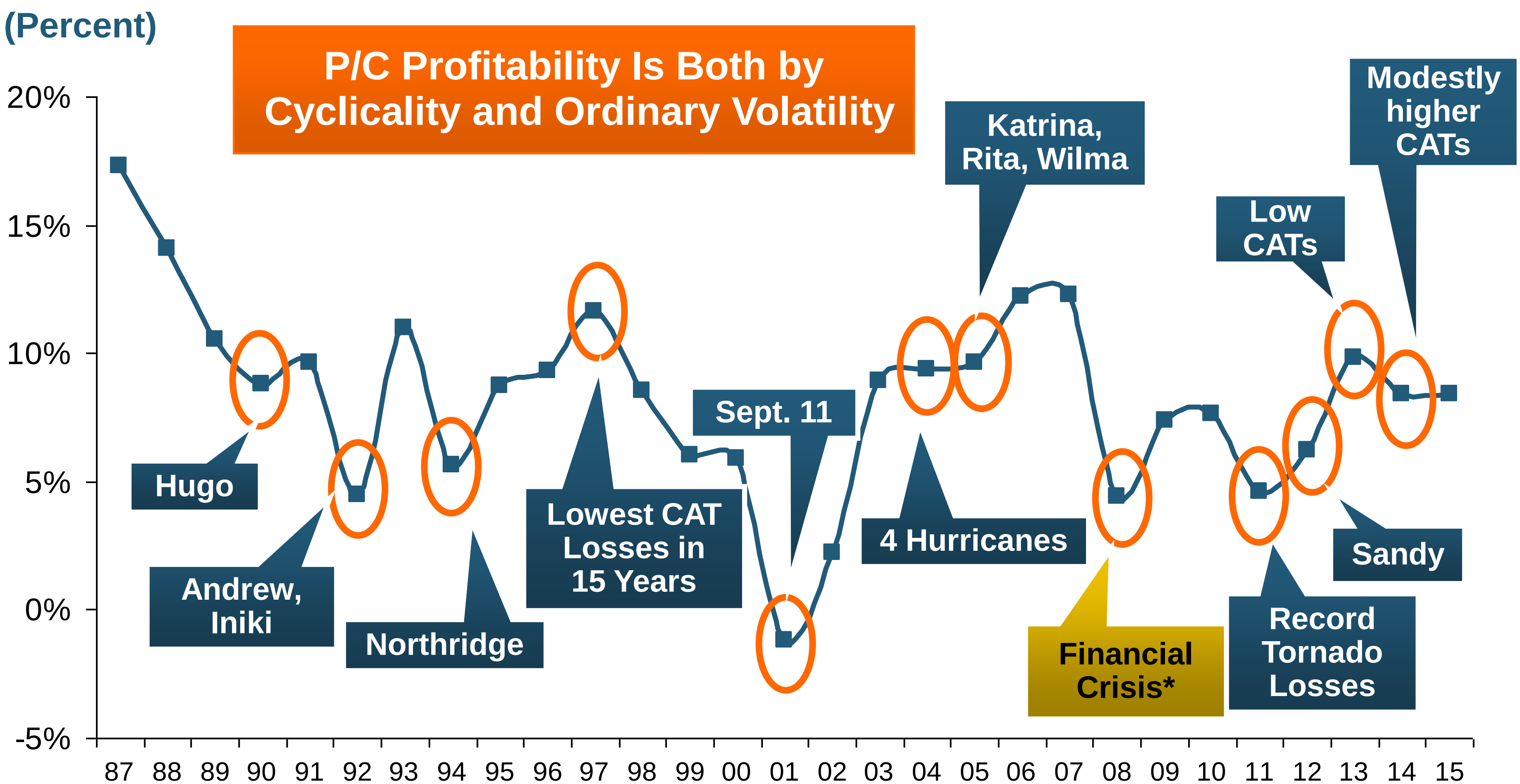
INSURANCE INFORMATION INSTITUTE



*Profitability = P/C insurer ROEs. 2011-15 figures are estimates based on ROAS data. Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers.

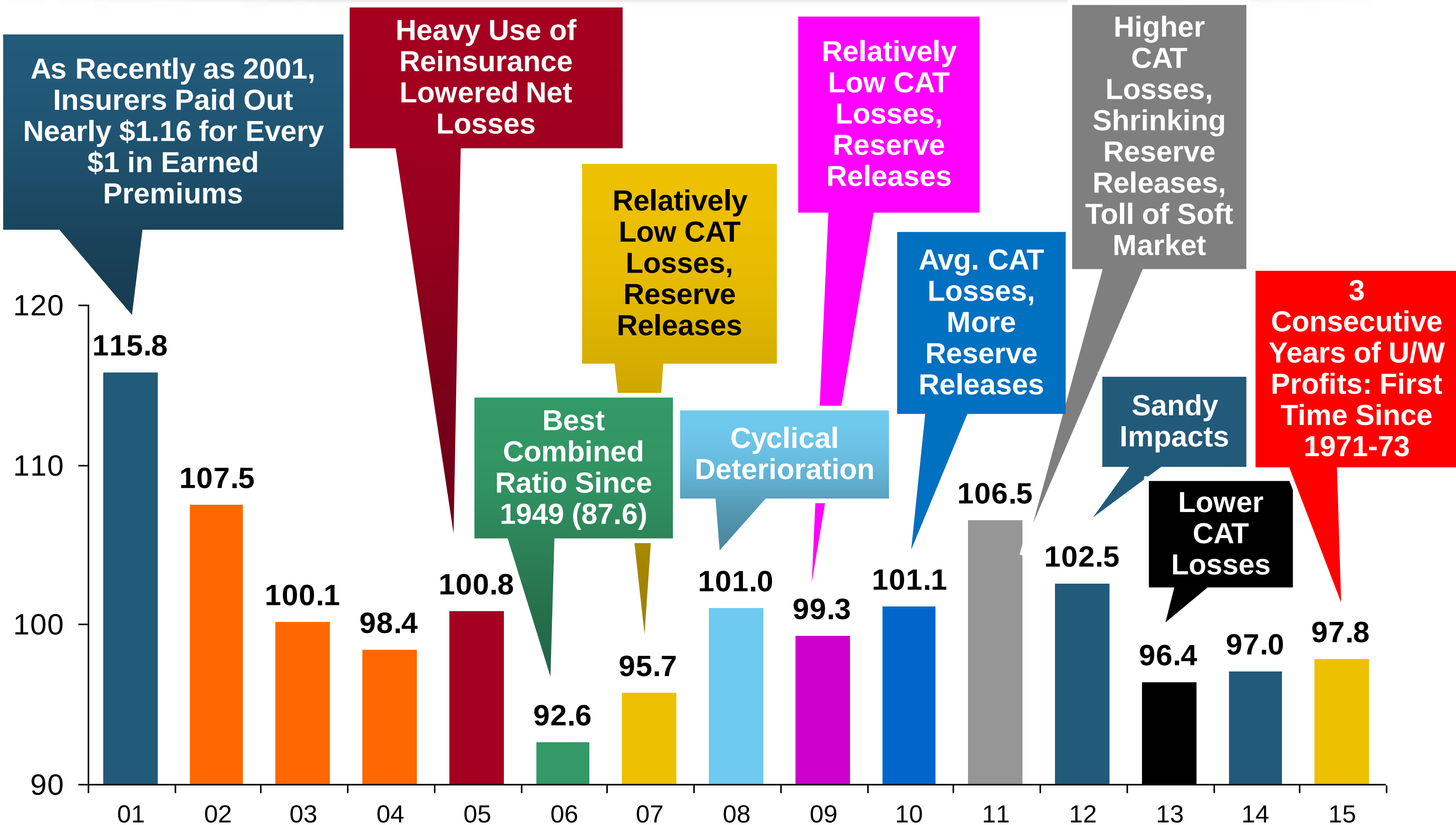
Source: Insurance Information Institute; NAIC, ISO, A.M. Best, Conning

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



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

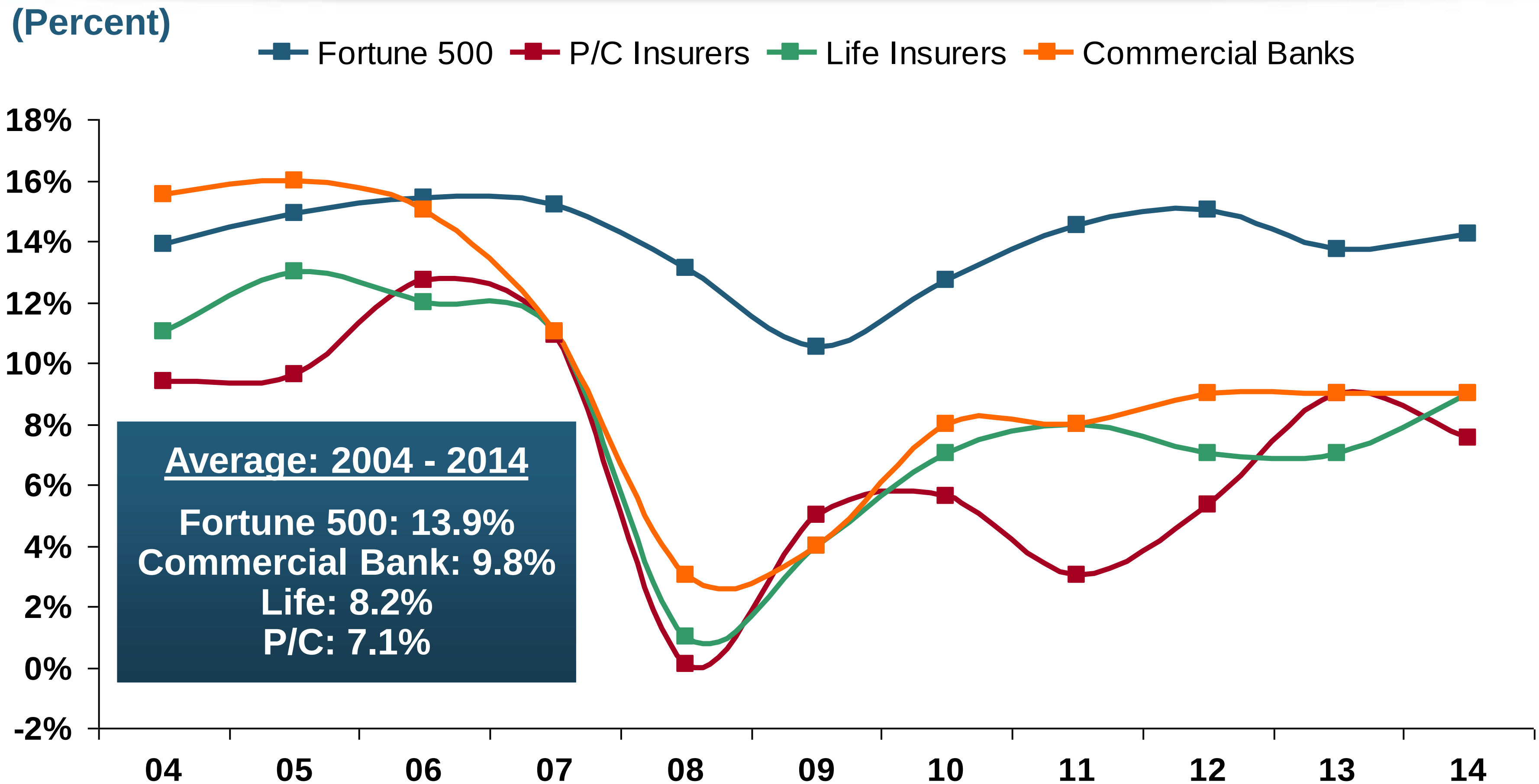
P/C Insurance Industry Combined Ratio, 2001–2015*



* 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 (2014-2015); Figure for 2010-2013 is from A.M. Best P&C Review and Preview, Feb. 16, 2016.

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



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

*GAAP basis.

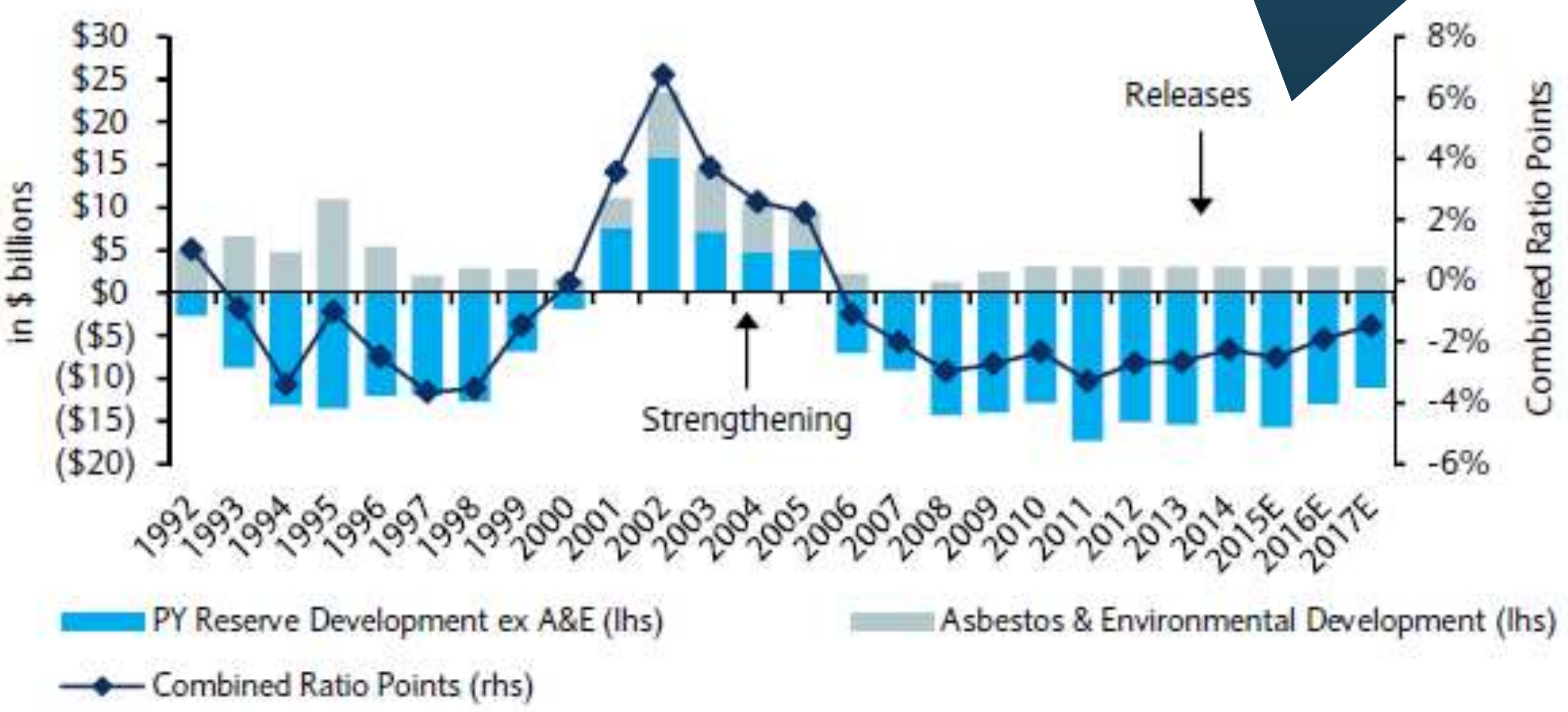
Sources: ISO, Fortune; Insurance Information Institute.

P/C Insurance Loss Reserve Development, 1992 – 2017E*

INSURANCE INFORMATION INSTITUTE

Reserve releases are expected to gradually taper off slowly, but will continue to benefit the bottom line and combined ratio through at least 2017

Reserve Change



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

INSURANCE INFORMATION INSTITUTE

Top Insurance Issues: *What's Hot, What's Not*

Eclectic Mix of Issues Garnered Media Attention So Far in 2016

Interest in Tech Issues Remains High

Top Issues, P/C, First Five Months 2015 vs. First Five Months* 2016[1]

INSURANCE INFORMATION INSTITUTE

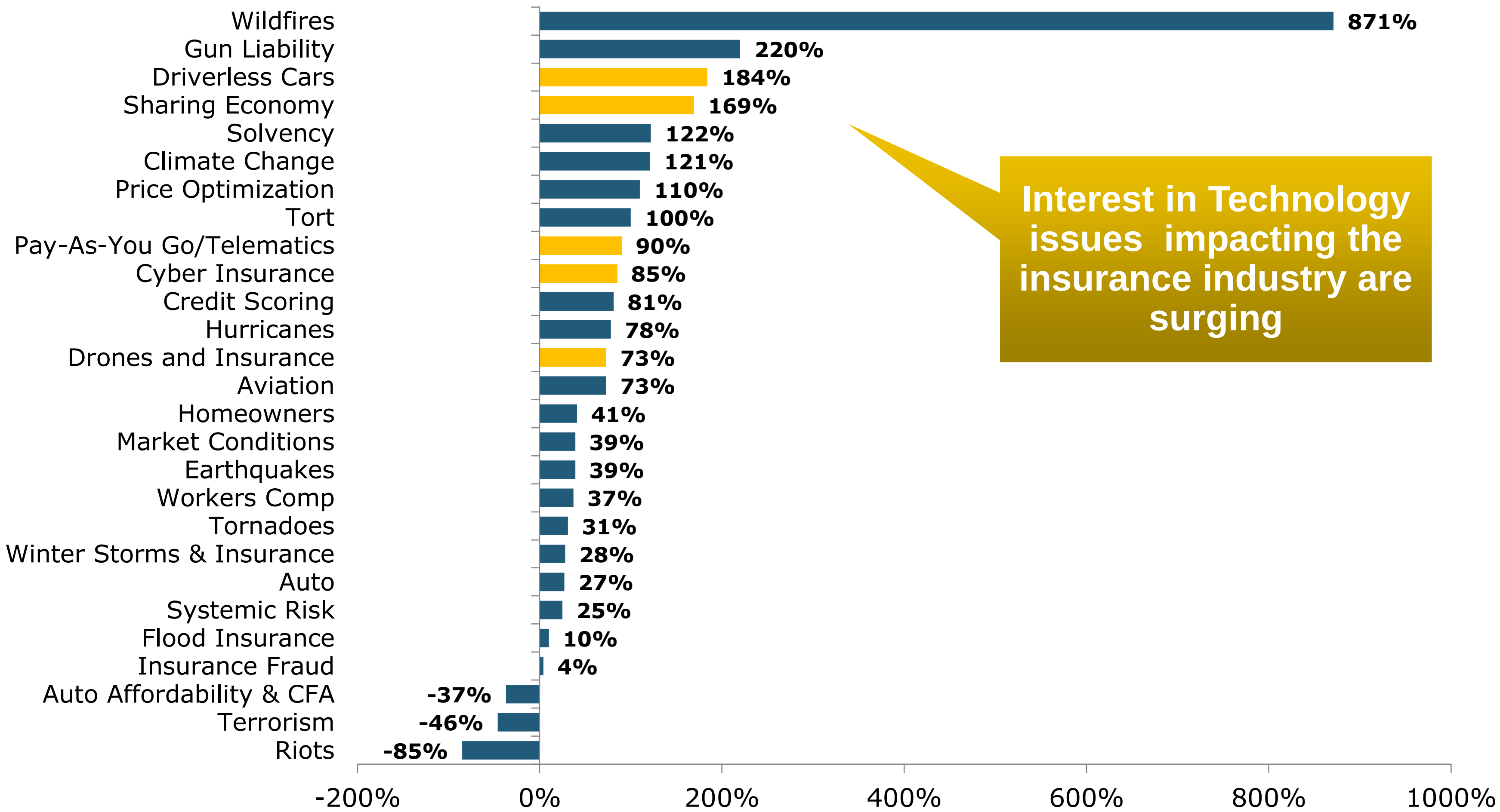
	Top Issues	2015	2016	% Increase/Decrease
1	Auto	12,506	15,872	27%
2	Solvency	5,944	13,174	122%
3	Driverless Cars	3,138	8,909	184%
4	Homeowners	5,755	8,113	41%
5	Cyber Insurance	4,048	7,489	85%
6	Wildfires	614	5,961	871%
7	Market Conditions	4,122	5,716	39%
8	Tort	2,536	5,081	100%
9	Earthquakes	3,502	4,854	39%
10	Insurance Fraud	4,582	4,764	4%
11	Terrorism	7,815	4,247	-46%
12	Climate Change	1,879	4,151	121%
13	Pay-As-You Go/Telematics	2,162	4,104	90%
14	Tornadoes	2,257	2,953	31%
15	Hurricanes	1,451	2,576	78%
16	Flood Insurance	2,223	2,437	10%
17	Workers Comp	1,350	1,843	37%
18	Sharing Economy	503	1,352	169%
19	Drones and Insurance	409	709	73%
20	Price Optimization	329	690	110%
21	Winter Storms & Insurance	522	666	28%
22	Aviation	241	416	73%
23	Gun Liability	98	314	220%
24	Systemic Risk	189	236	25%
25	Auto Affordability & CFA	247	155	-37%
26	Credit Scoring	84	152	81%
27	Riots	944	143	-85%
	Total	**69,041**	**106,368**	**54%**

*Through May 15.
[1]Based on a search of Meltwater News

I.I.I. Media Index, P/C, First Five Months 2015 vs. First Five Months* 2016[1]

INSURANCE INFORMATION INSTITUTE

Percent Increase/Decrease from Previous Year



*Through May 15.
[1]Based on a search of Meltwater News

Auto & Home Insurance: State of the Personal Lines Market

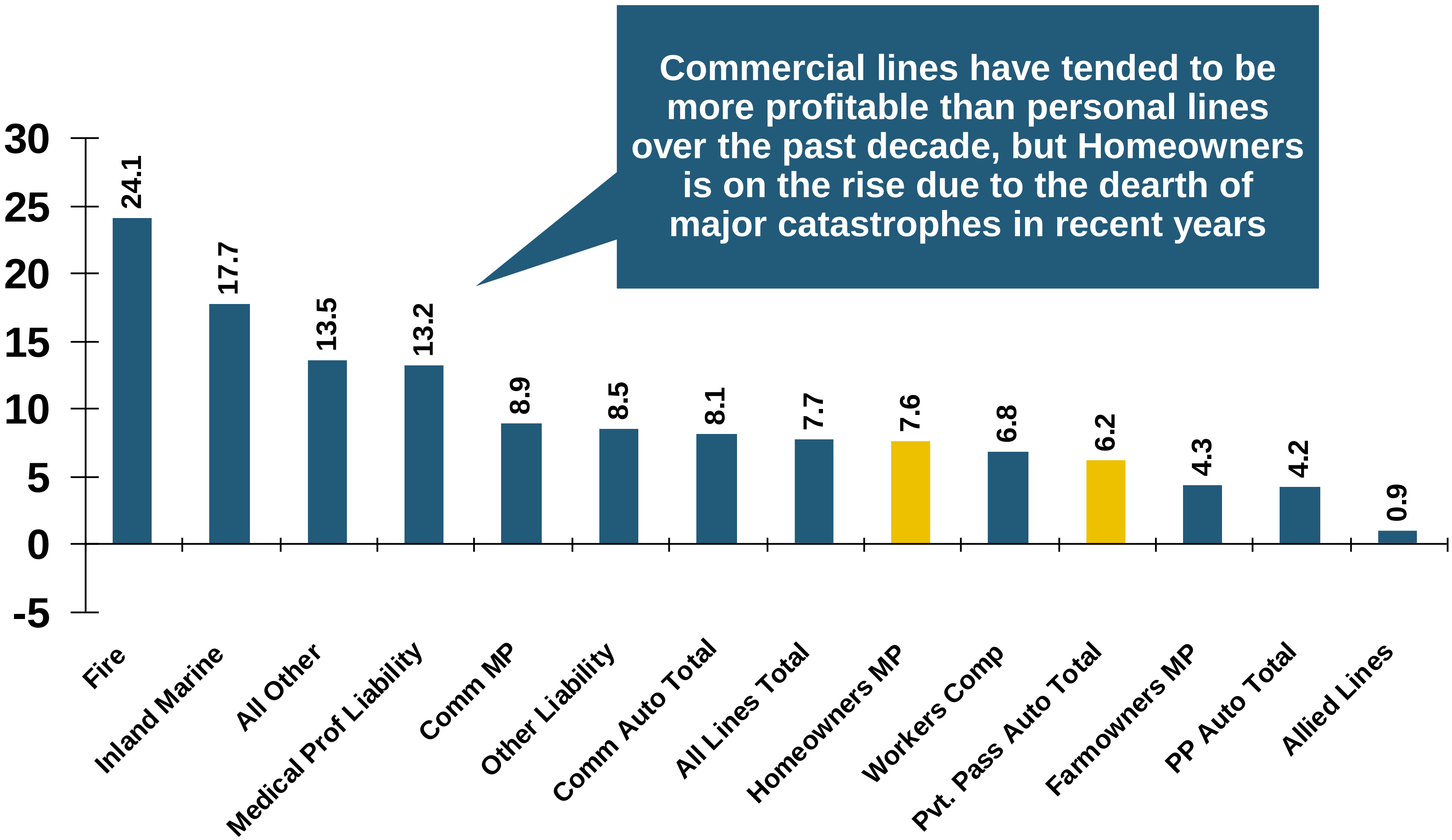
Results Have Been Fairly Strong and Stable in Recent Years

Dearth of Major CATs, Pricing Discipline Has Helped

Personal Lines Profitability

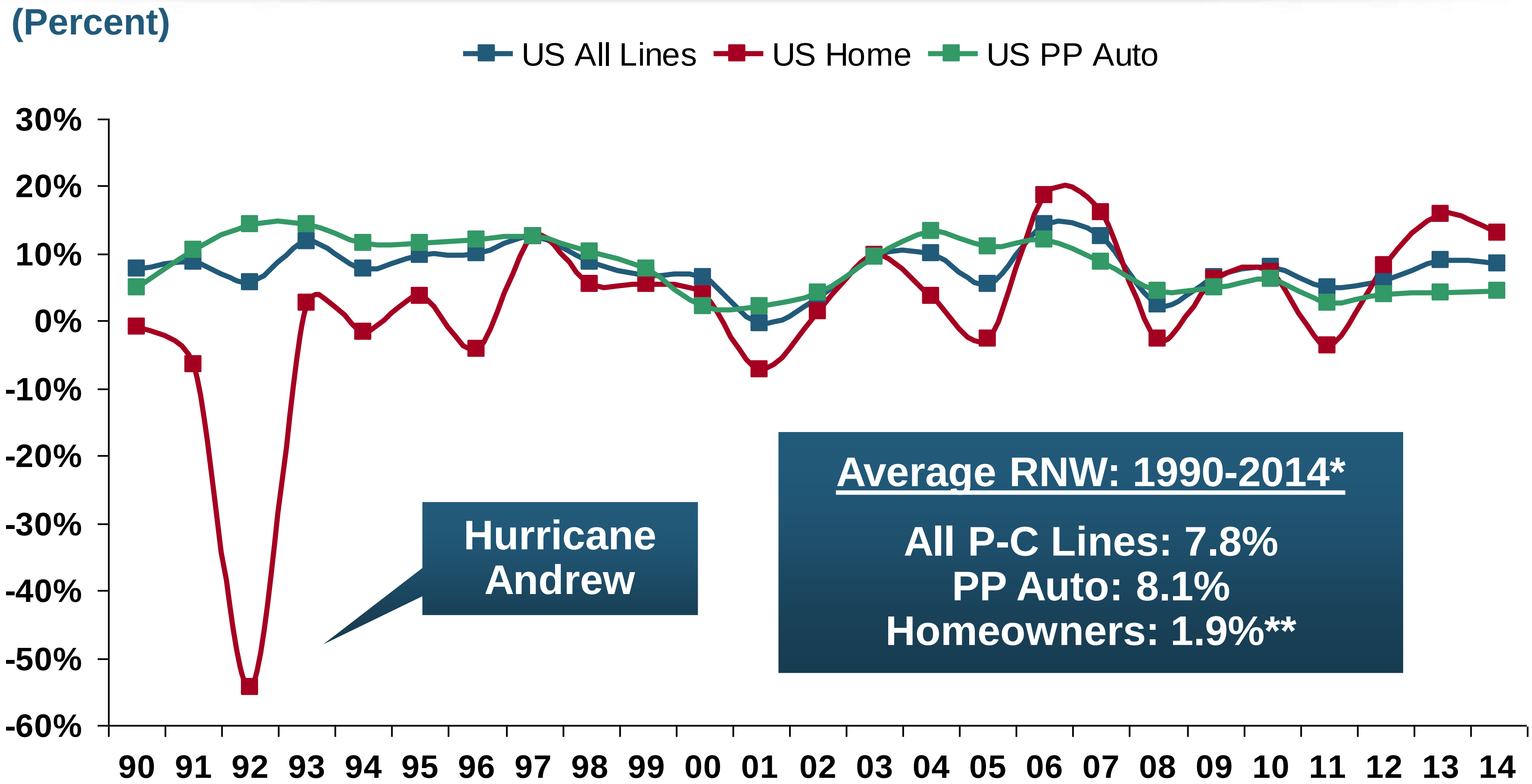
Profitability of Auto and Homeowners Lines Varies Tremendously Over Time and Across States

Return on Net Worth (RNW) All Lines: 2005-2014 Average



Source: NAIC; Insurance Information Institute.

Return on Net Worth: All P-C Lines vs. Homeowners & Pvt. Pass. Auto, 1990-2014*



Pvt.Pass. Auto Has Consistently Outperformed the P-C Industry as a Whole. Homeowners Volatility is Associated Primarily With Coastal Exposure Issues

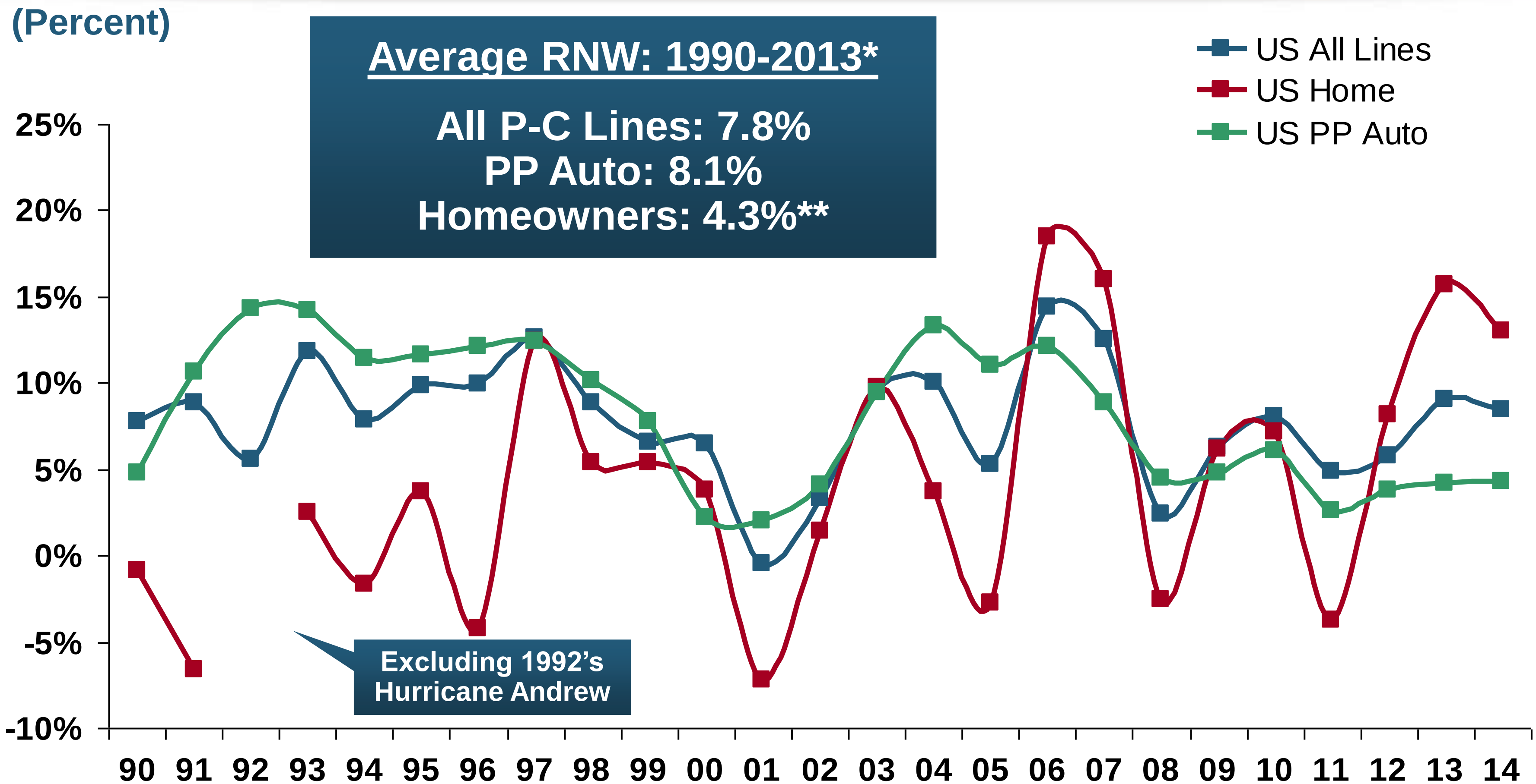
*Latest available.
**If 1992, the year of Hurricane Andrew is excluded, the resulting homeowners RNW is 4.3%.
Sources: NAIC; Insurance Information Institute.

Return on Net Worth: All P-C Lines vs. Homeowners & Pvt. Pass. Auto, 1990-2014*

INSURANCE INFORMATION INSTITUTE

Average RNW: 1990-2013*

All P-C Lines: 7.8%
PP Auto: 8.1%
Homeowners: 4.3%**

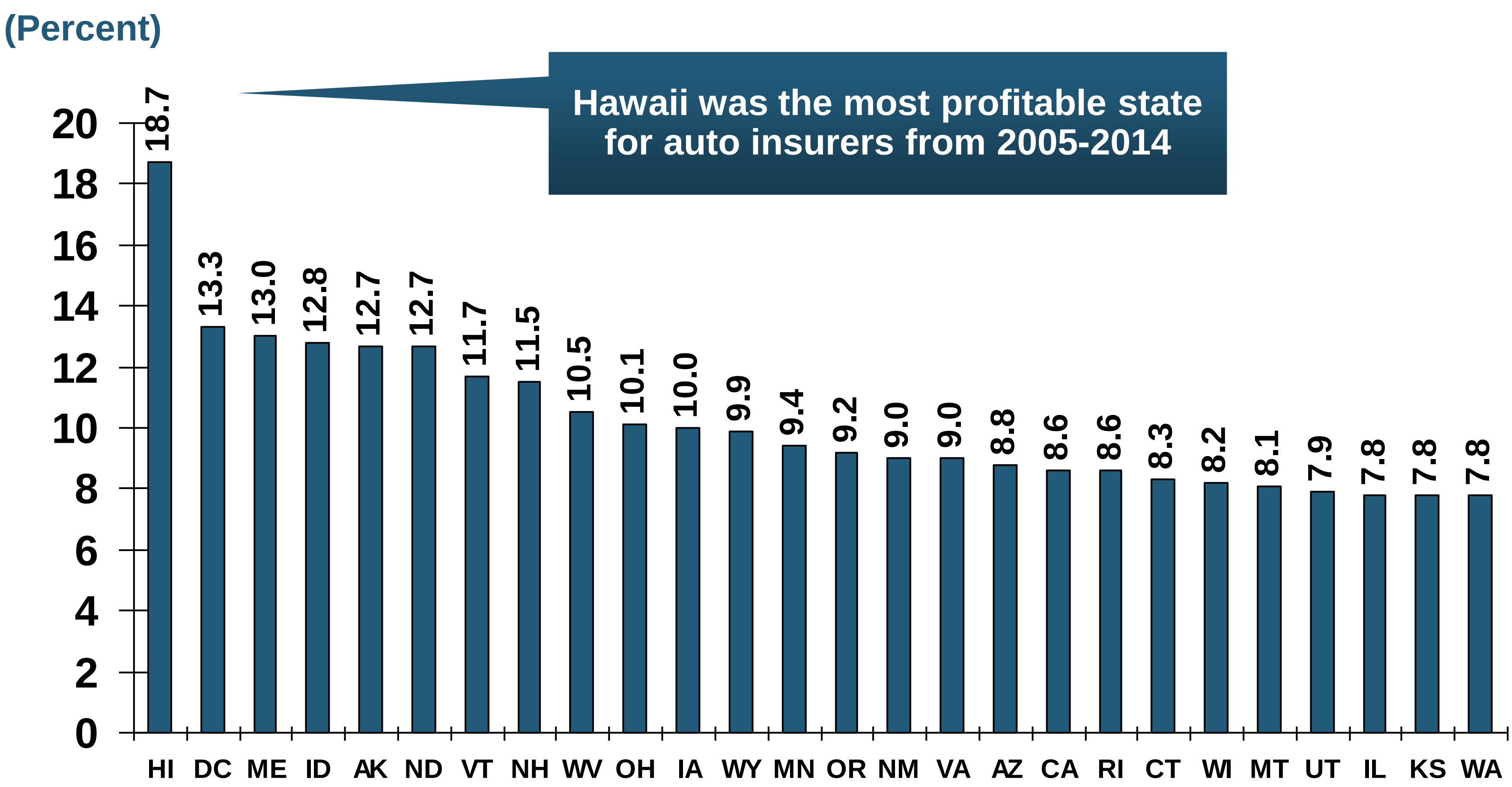


Pvt.Pass. Auto Has Consistently Outperformed the P-C Industry as a Whole. Homeowners Volatility is Associated Primarily With Coastal Exposure Issues

*Latest available.
**Excludes 1992, the year of Hurricane Andrew. If 1992 is included the resulting homeowners RNW is 1.9%
Sources: NAIC; Insurance Information Institute.

RNW Pvt. Passenger Auto, 2005-2014 Average: Highest 25 States

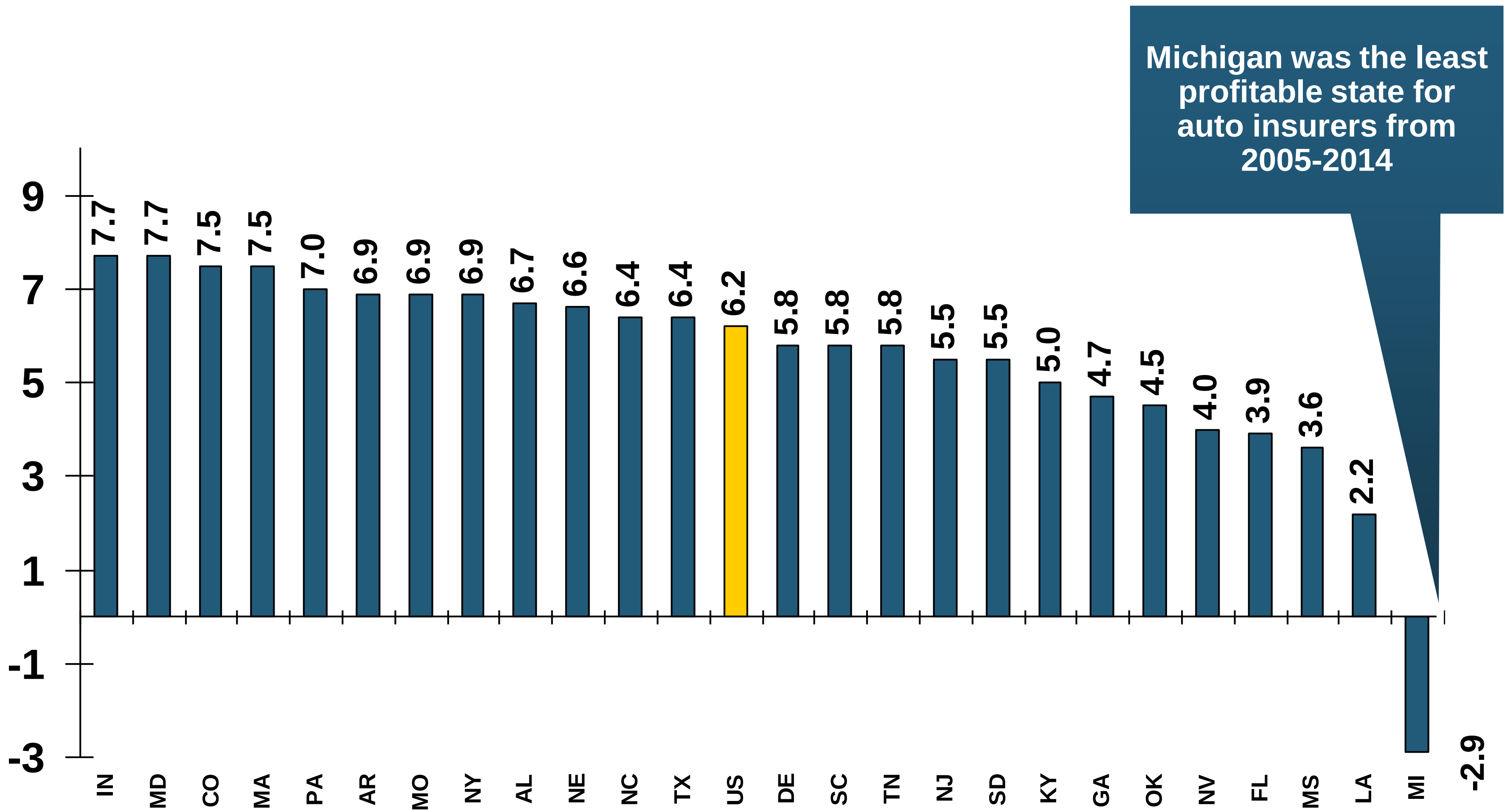
INSURANCE INFORMATION INSTITUTE



Sources: NAIC; Insurance Information Institute

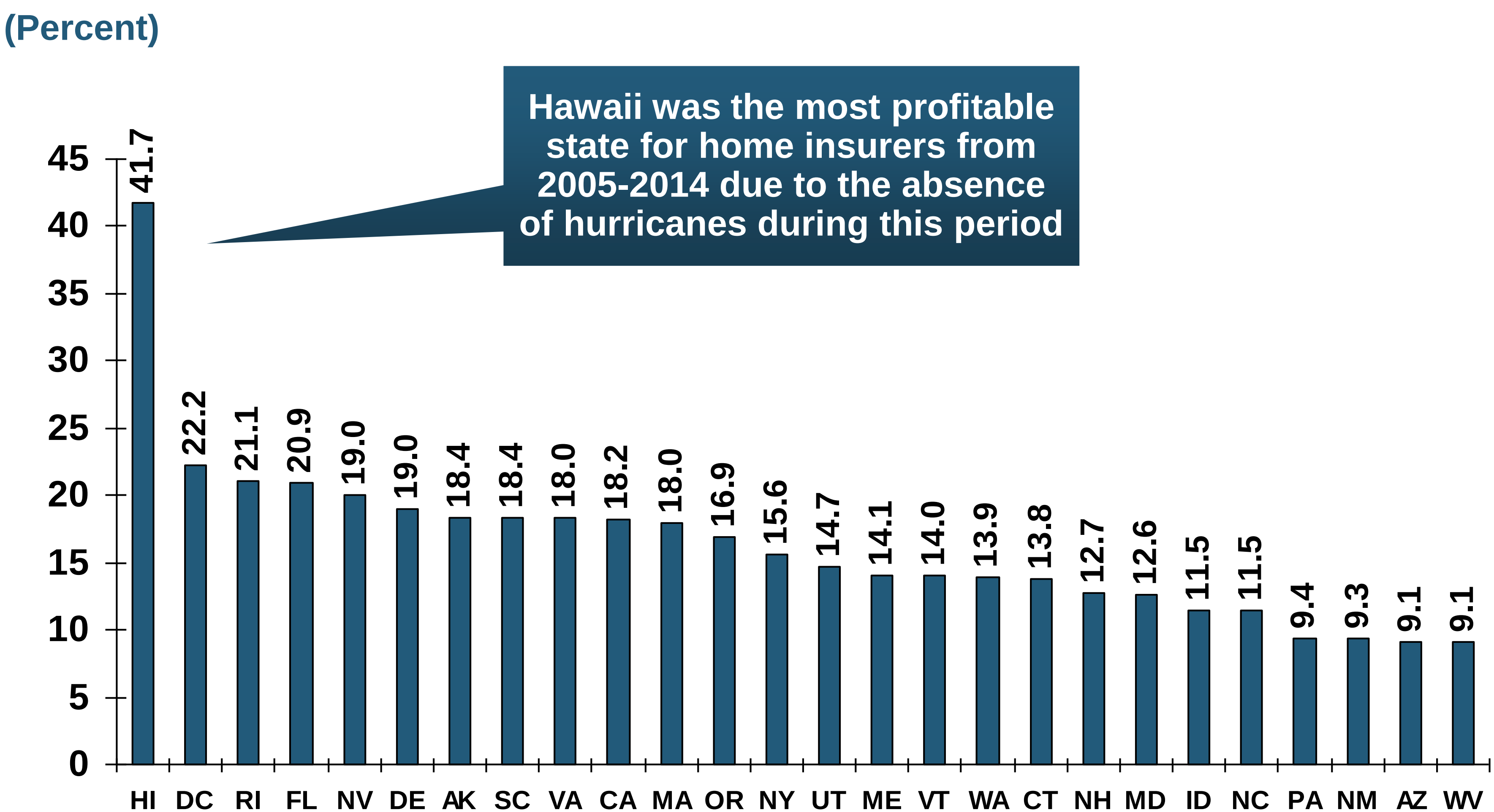
RNW Pvt. Passenger Auto, 2005-2014 Average: Lowest 25 States

(Percent)



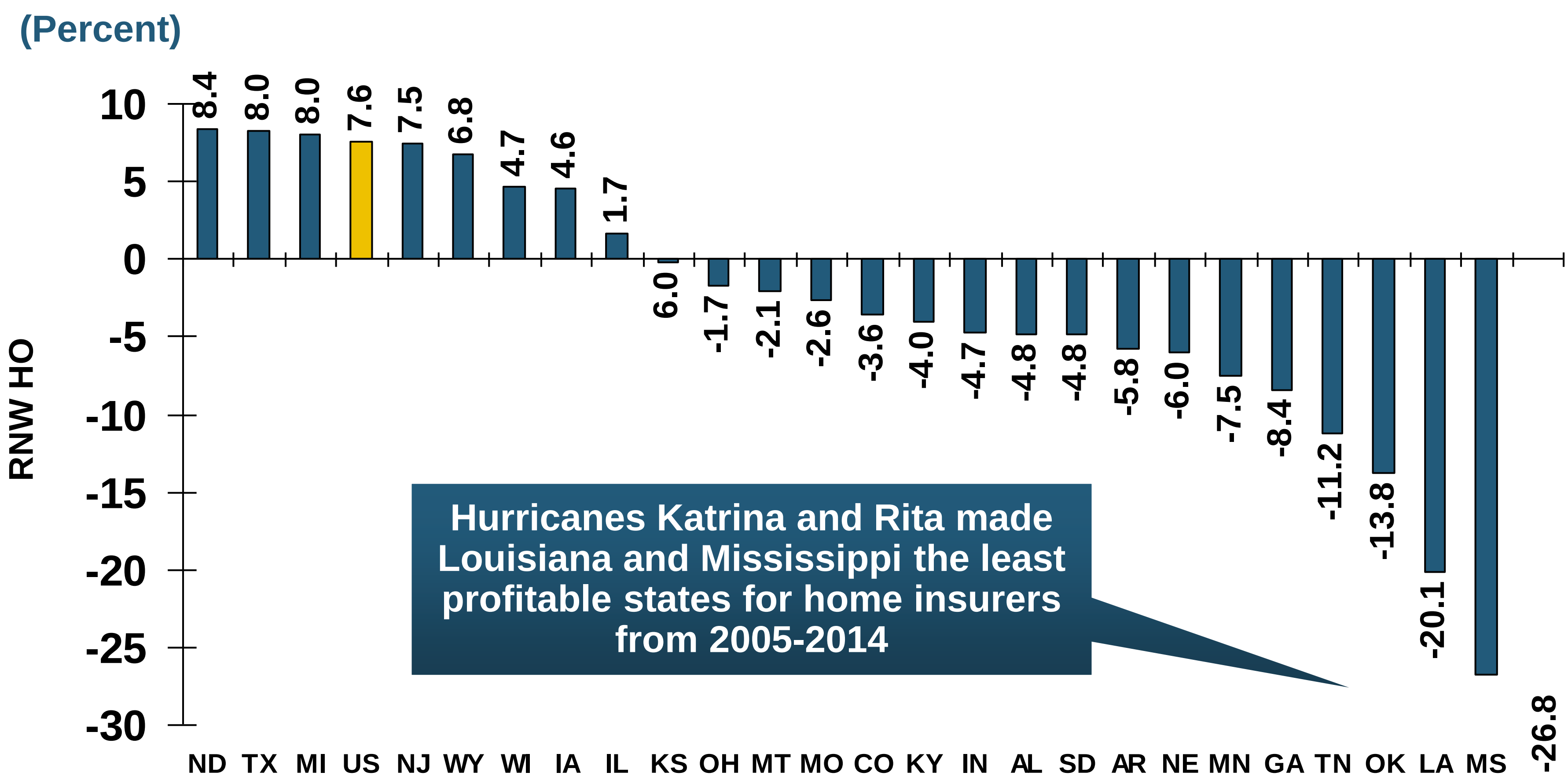
Sources: NAIC; Insurance Information Institute

RNW Homeowners Insurance, 2005-2014 Average: Highest 25 States



Sources: NAIC; Insurance Information Institute

RNW Homeowners Insurance, 2005-2014 Average: Lowest 25 States



Sources: NAIC; Insurance Information Institute

INSURANCE
INFORMATION
INSTITUTE

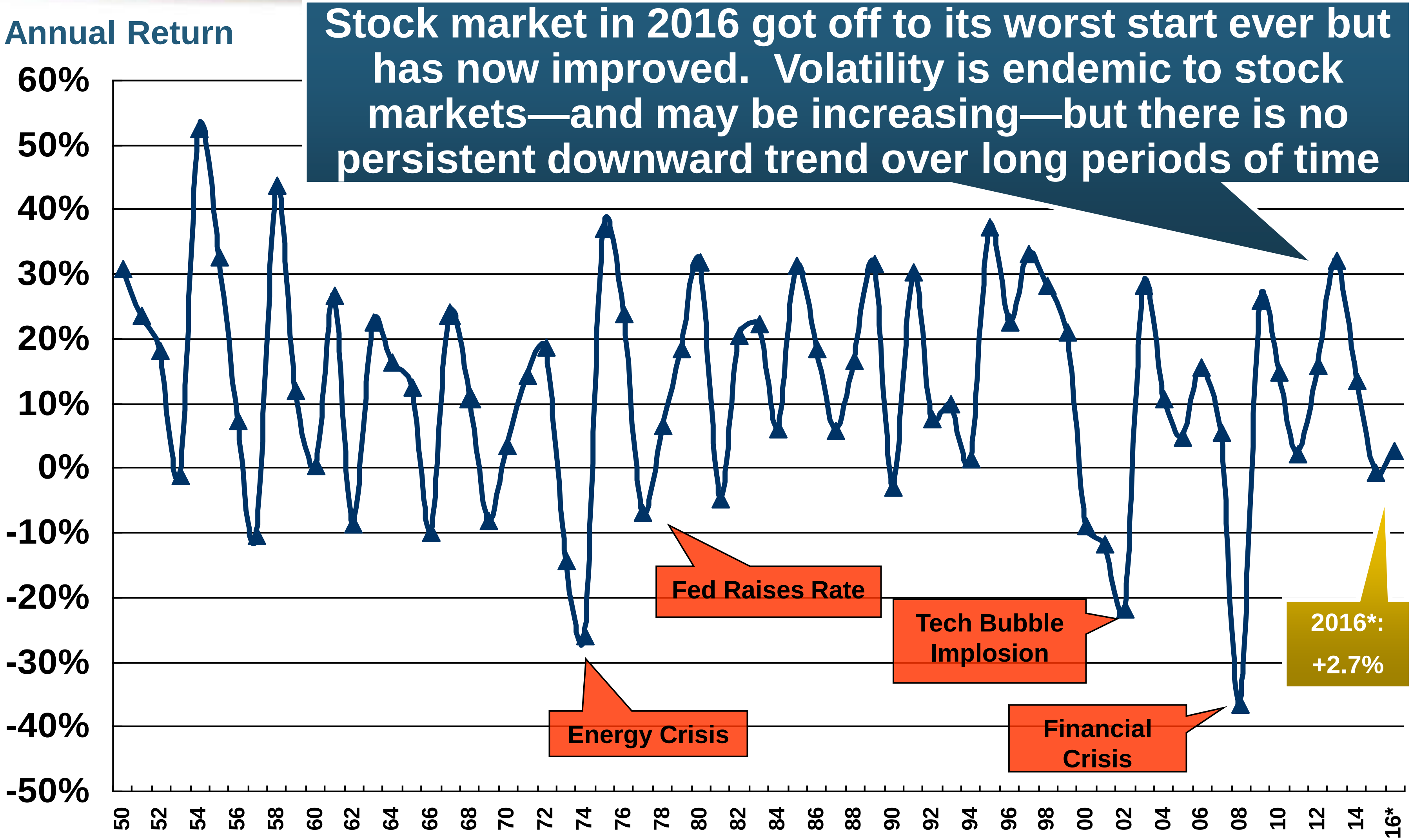
INVESTMENTS:
THE NEW REALITY

Investment Performance is a Key Driver of Profitability

Depressed Yields Will Necessarily Influence Underwriting & Pricing

S&P 500 Index Returns, 1950 – 2016*

INSURANCE INFORMATION INSTITUTE



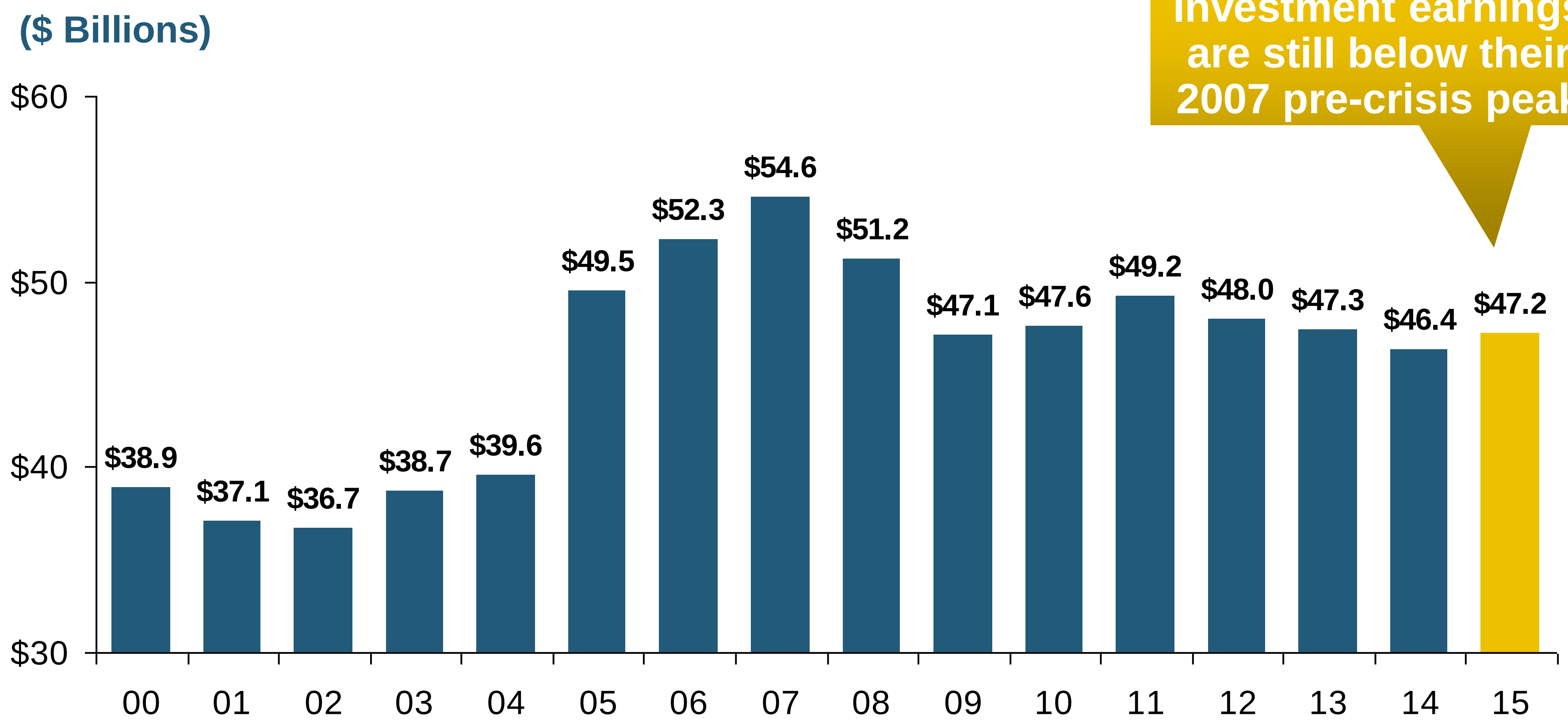
*Through June 5, 2016.

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

Property/Casualty Insurance Industry Investment Income: 2000–2015[1]

INSURANCE INFORMATION INSTITUTE

Investment earnings are still below their 2007 pre-crisis peak

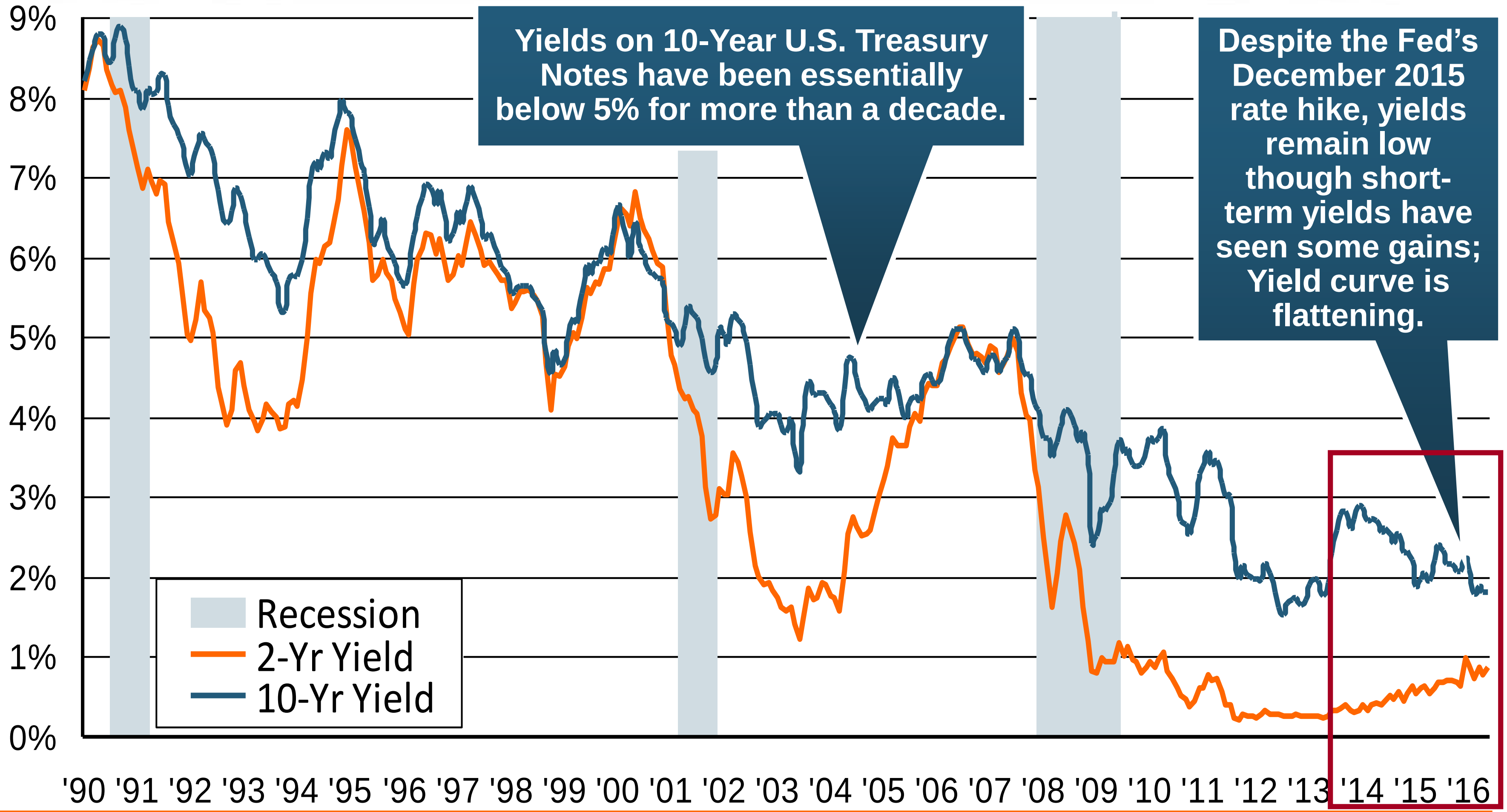


Due to persistently low interest rates, investment income fell in 2012, 2013 and 2014 but showed a small (1.9%) increase in 2015—a trend that may continue.

[1] Investment gains consist primarily of interest and stock dividends. Sources: ISO; Insurance Information Institute.

U.S. Treasury Security Yields: A Long Downward Trend, 1990–2016*

INSURANCE INFORMATION INSTITUTE



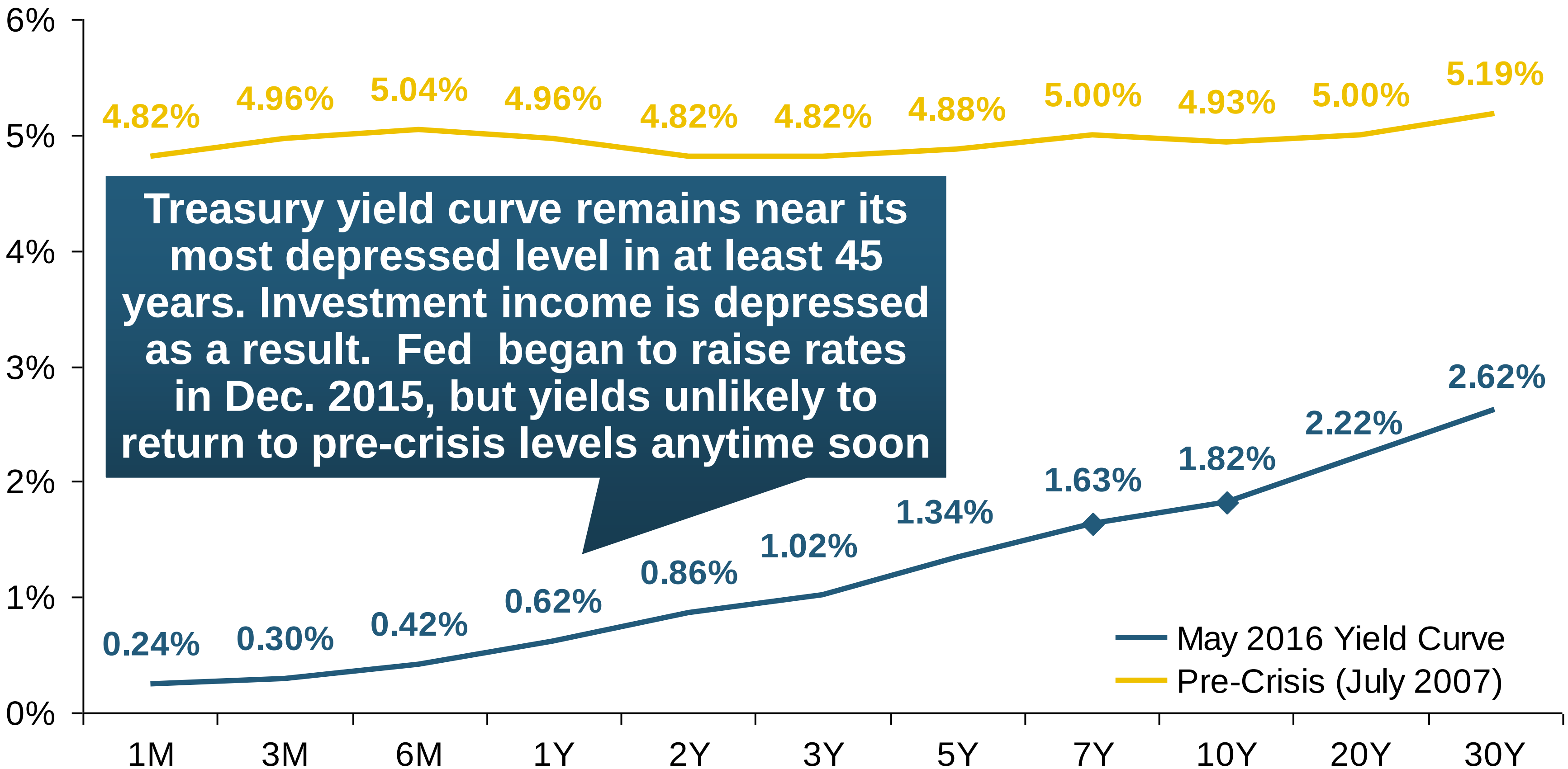
Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, most P/C insurer portfolios will have low-yielding bonds for years to come.

*Monthly, constant maturity, nominal rates, through May 20, 2016.

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. May 2016*

INSURANCE INFORMATION INSTITUTE



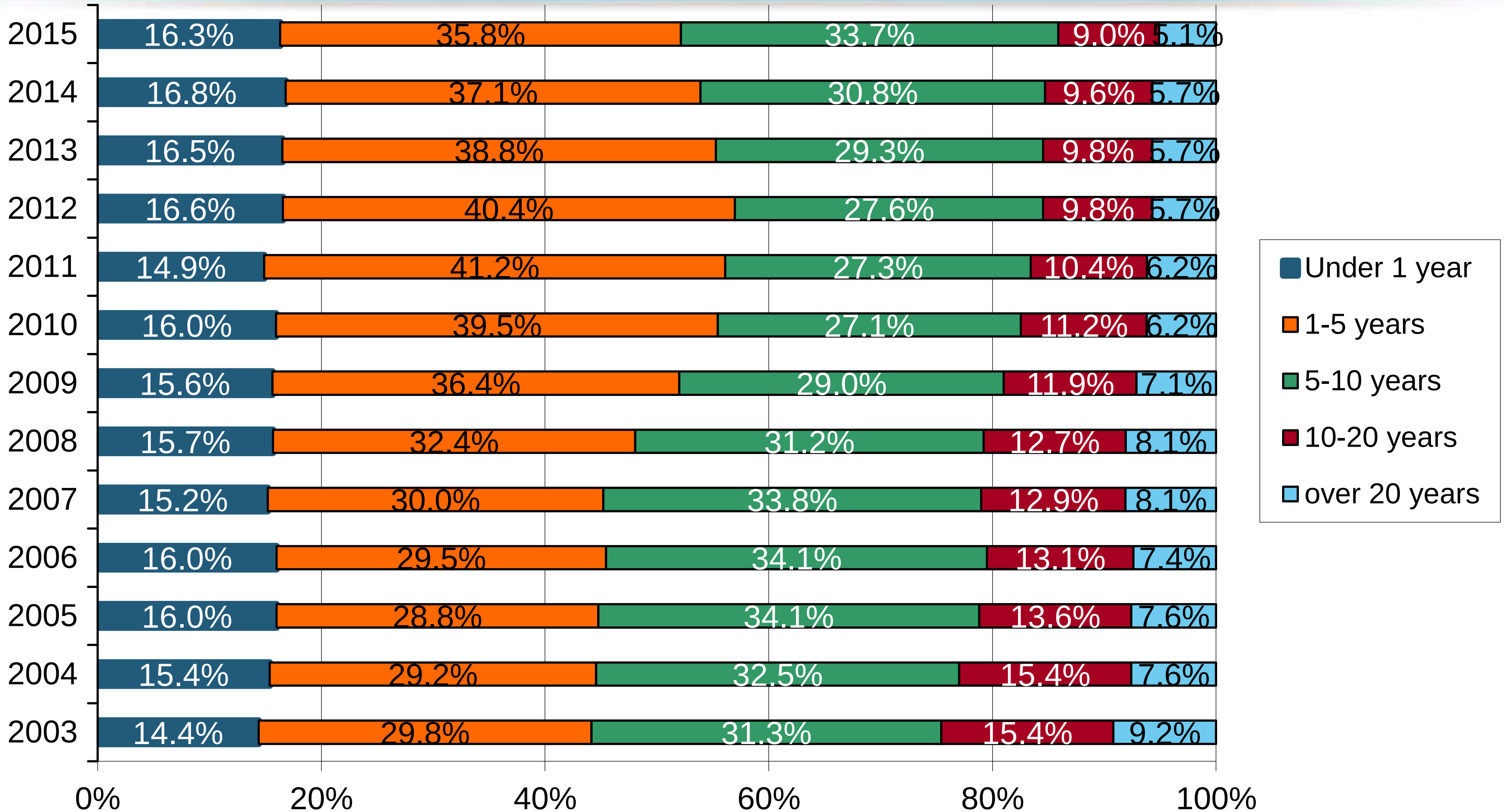
The Fed Began to Raise Rates in Dec. 2015 but Market Volatility and Weakness Abroad Have Made Additional Hikes Difficult

*As of May 20, 2016.

Source: Federal Reserve Board of Governors: http://www.federalreserve.gov/releases/h15/data.htm; Insurance Information Institute.

Distribution of Bond Maturities, P/C Insurance Industry, 2003-2015

INSURANCE INFORMATION INSTITUTE

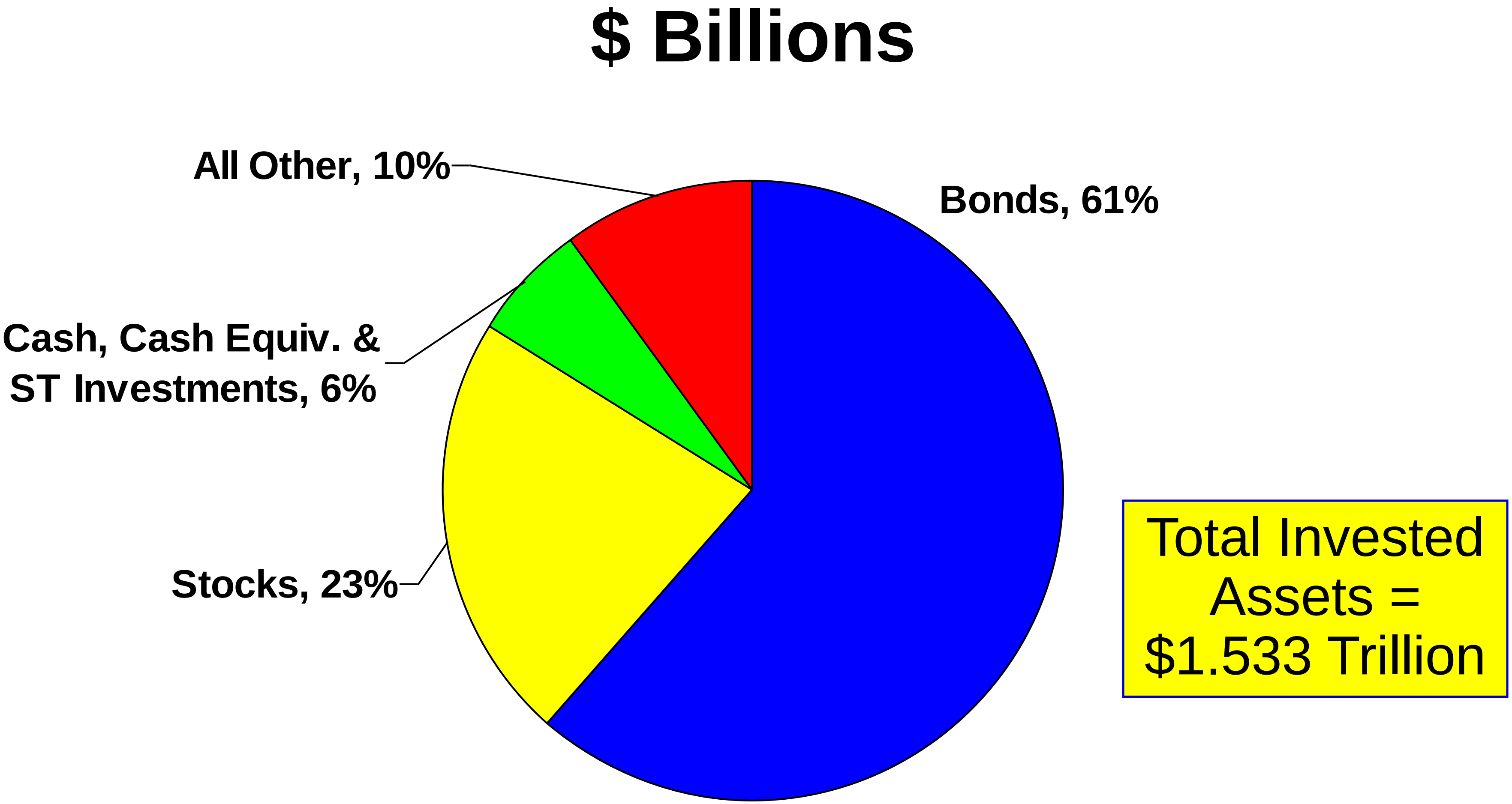


Two main shifts over these years. From 2008 to 2011-12, from bonds with longer maturities to bonds with shorter maturities. But beginning in 2013, the reverse. Note, however, that the percentages in bonds with maturities over 10 years continues to drop.

Sources: SNL Financial; Insurance Information Institute.

Distribution of Invested Assets: P/C Insurance Industry, 2014

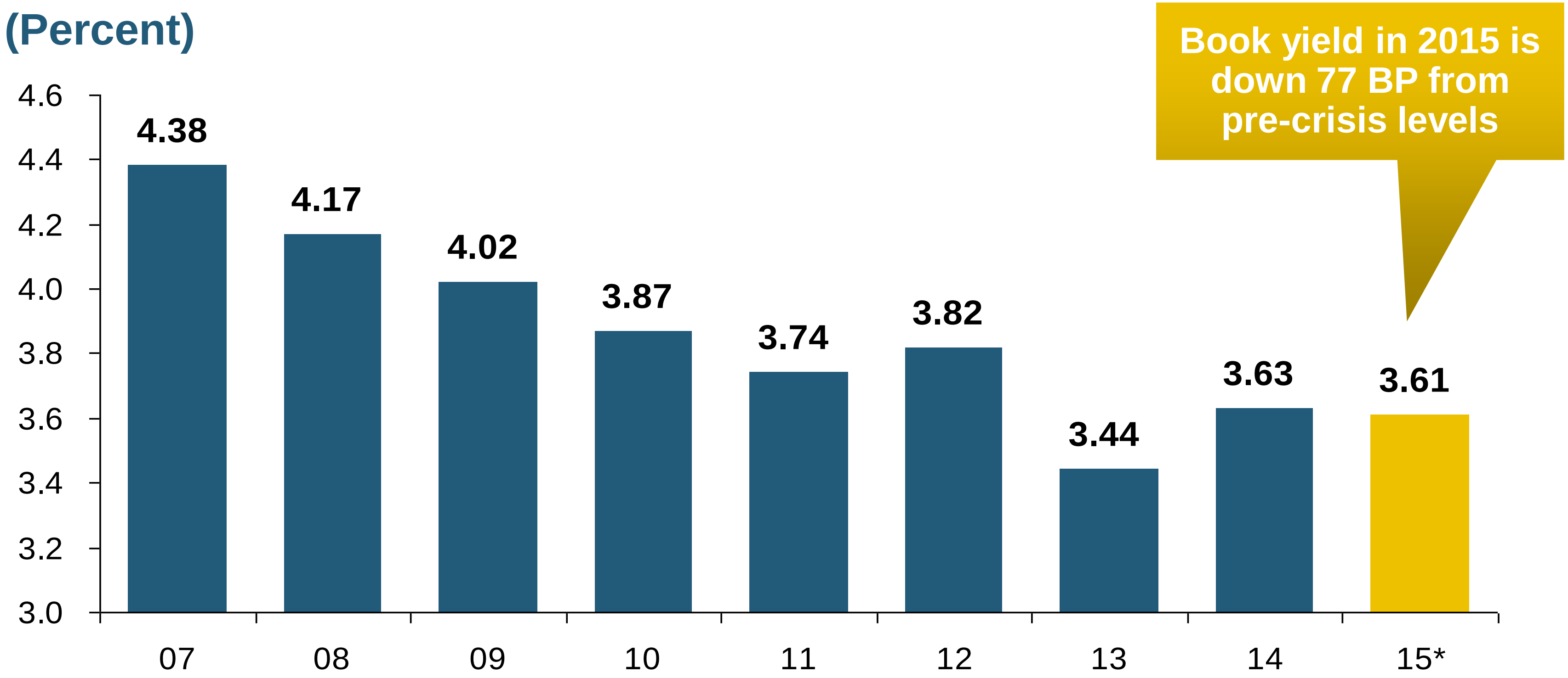
INSURANCE INFORMATION INSTITUTE



Source: Insurance Information Institute *Fact Book 2016,* A.M. Best.

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

INSURANCE INFORMATION INSTITUTE

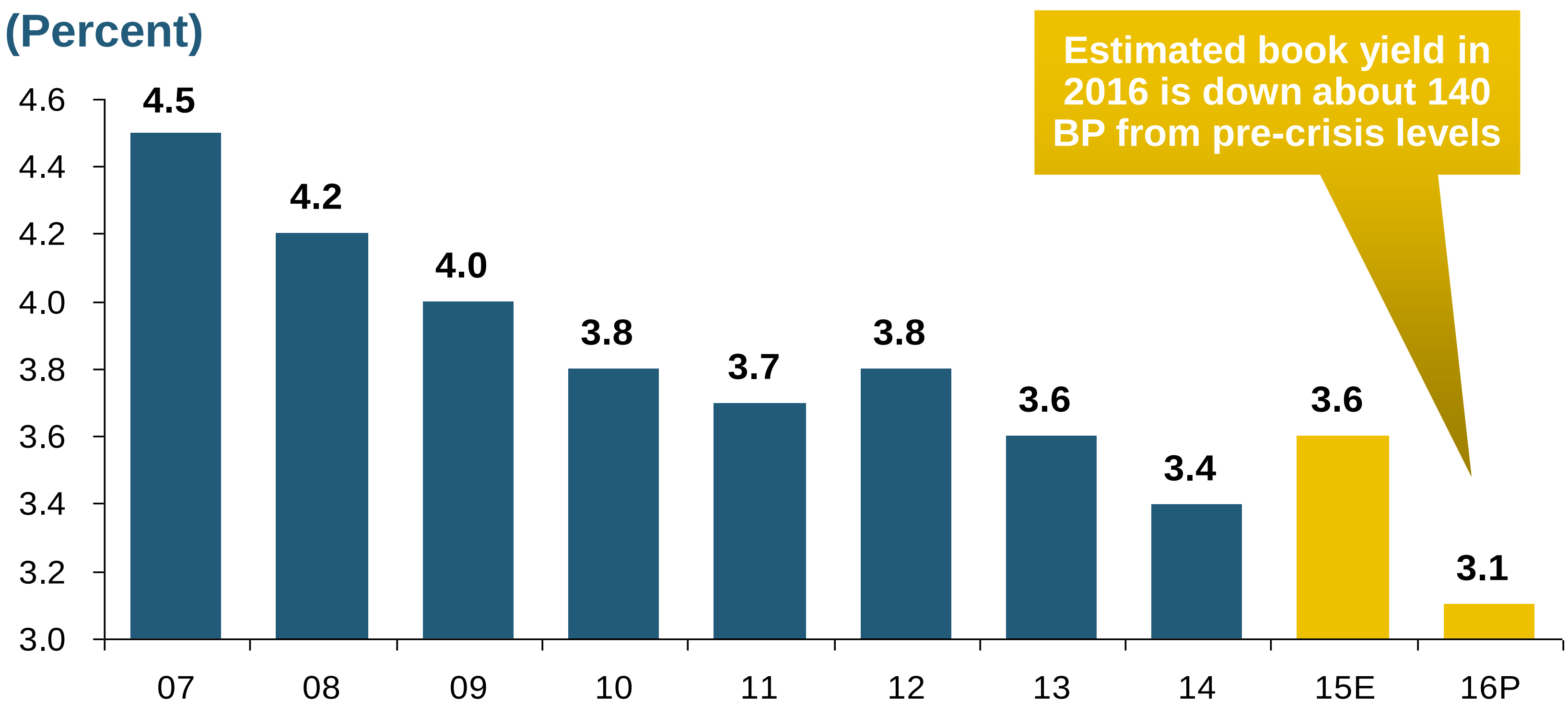


The yield on invested assets remains low relative to pre-crisis yields. The Fed's plan to raise interest rates in late 2015 has already pushed up some yields, albeit quite modestly.

*2015 figure is the average of the four quarters ending in 2015:Q2.
Sources: SNL Financial; Insurance Information Institute

Net Investment Yield on Property/ Casualty Insurance Invested Assets, 2007–2016P*

INSURANCE INFORMATION INSTITUTE

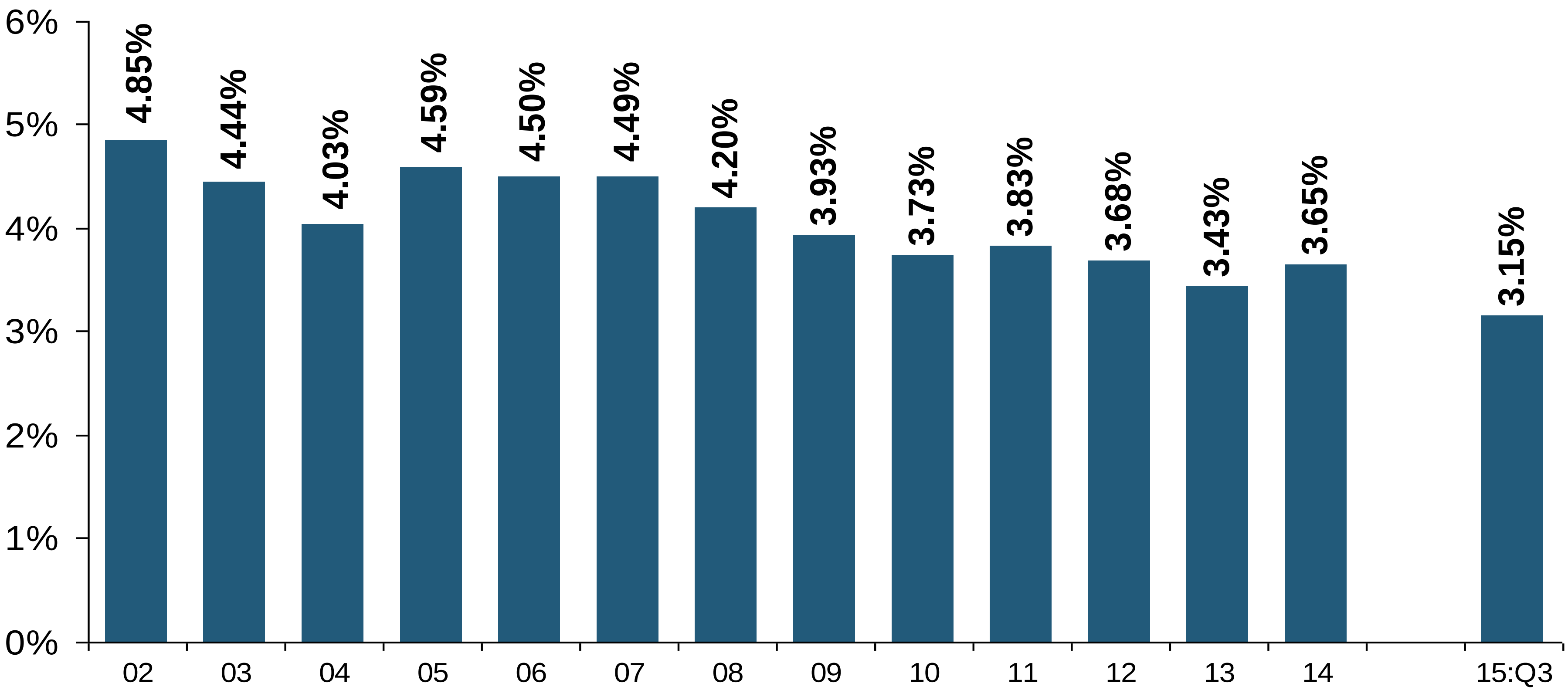


The yield on invested assets remains low relative to pre-crisis yields. The Fed's plan to raise interest rates in late 2015 has pushed up some yields, albeit quite modestly.

Sources: A.M. Best; 2015E-2016P figures from A.M. Best P/C Review and Preview, Feb. 2016; Insurance Information Institute

P/C Insurer Portfolio Yields, 2002-2015:Q3

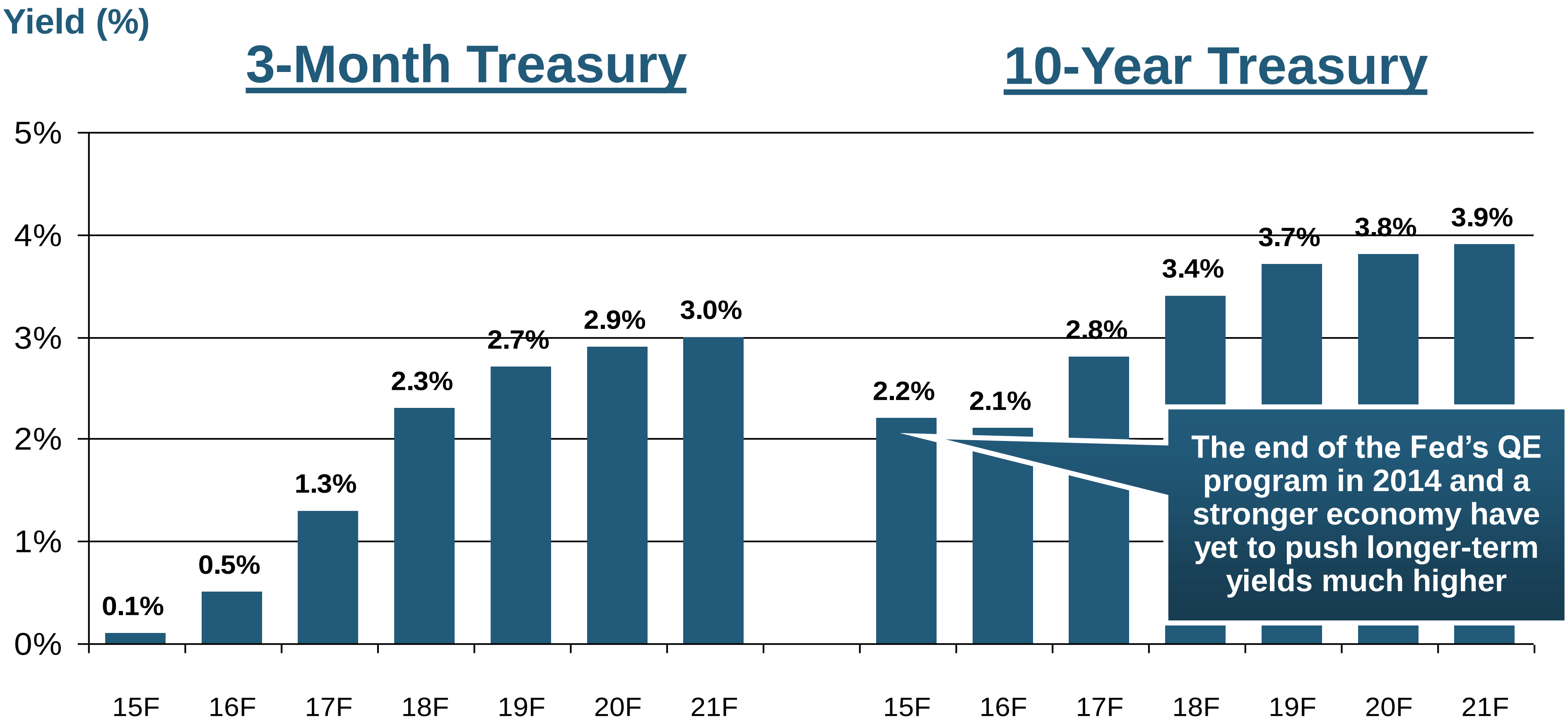
INSURANCE INFORMATION INSTITUTE



P/C carrier yields have been falling for over a decade, reflecting the long downtrend in prevailing interest rates. Even as prevailing rates rise in the next few years, portfolio yields are unlikely to rise quickly, since low yields of recent years are "baked in" to future returns.

Sources: NAIC, via SNL Financial; Insurance Information Institute.

Interest Rate Forecasts: 2016 – 2021



A full normalization of interest rates is unlikely until 2019, more than a decade after the onset of the financial crisis.

Sources: Blue Chip Economic Indicators (4/16 for 2016 and 2017; for 2018-2021 3/16 issue); Insurance Info. Institute.

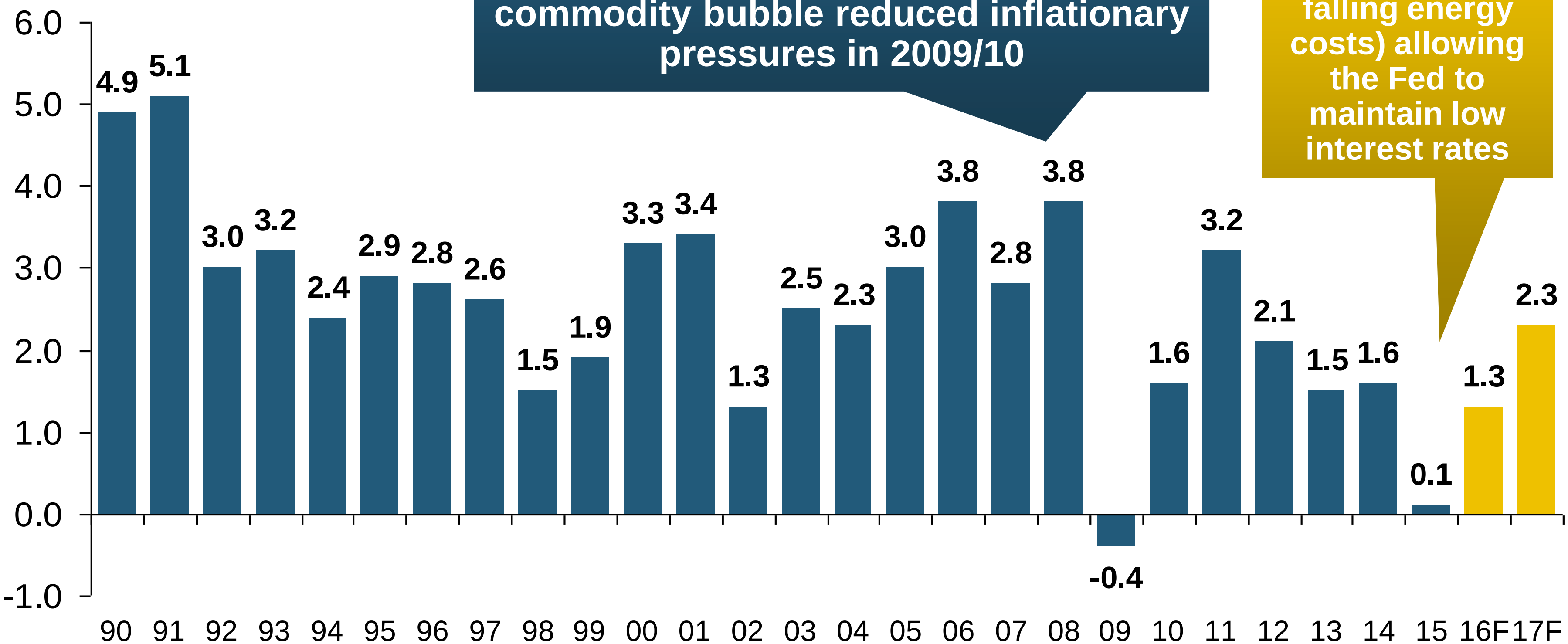
Annual Inflation Rates, (CPI-U, %), 1990–2017F

INSURANCE INFORMATION INSTITUTE

Annual Inflation Rates (%)

Inflation peaked at 5.6% in August 2008 on high energy and commodity crisis. The recession and the collapse of the commodity bubble reduced inflationary pressures in 2009/10

Inflationary expectations have slipped (due in part to falling energy costs) allowing the Fed to maintain low interest rates

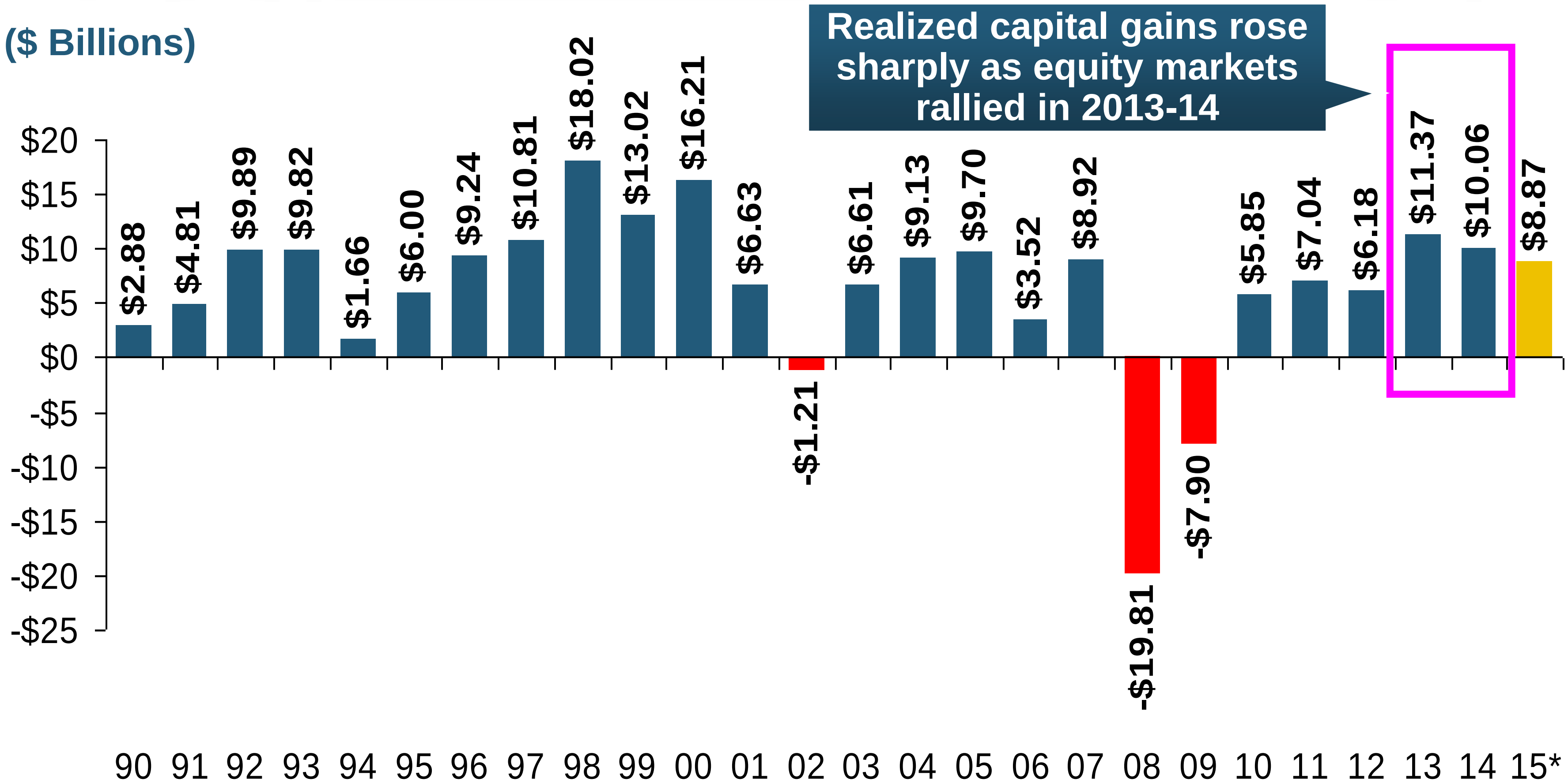


Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators, 4/16 (forecasts).

P/C Insurer Net Realized Capital Gains/Losses, 1990-2015:Q3*

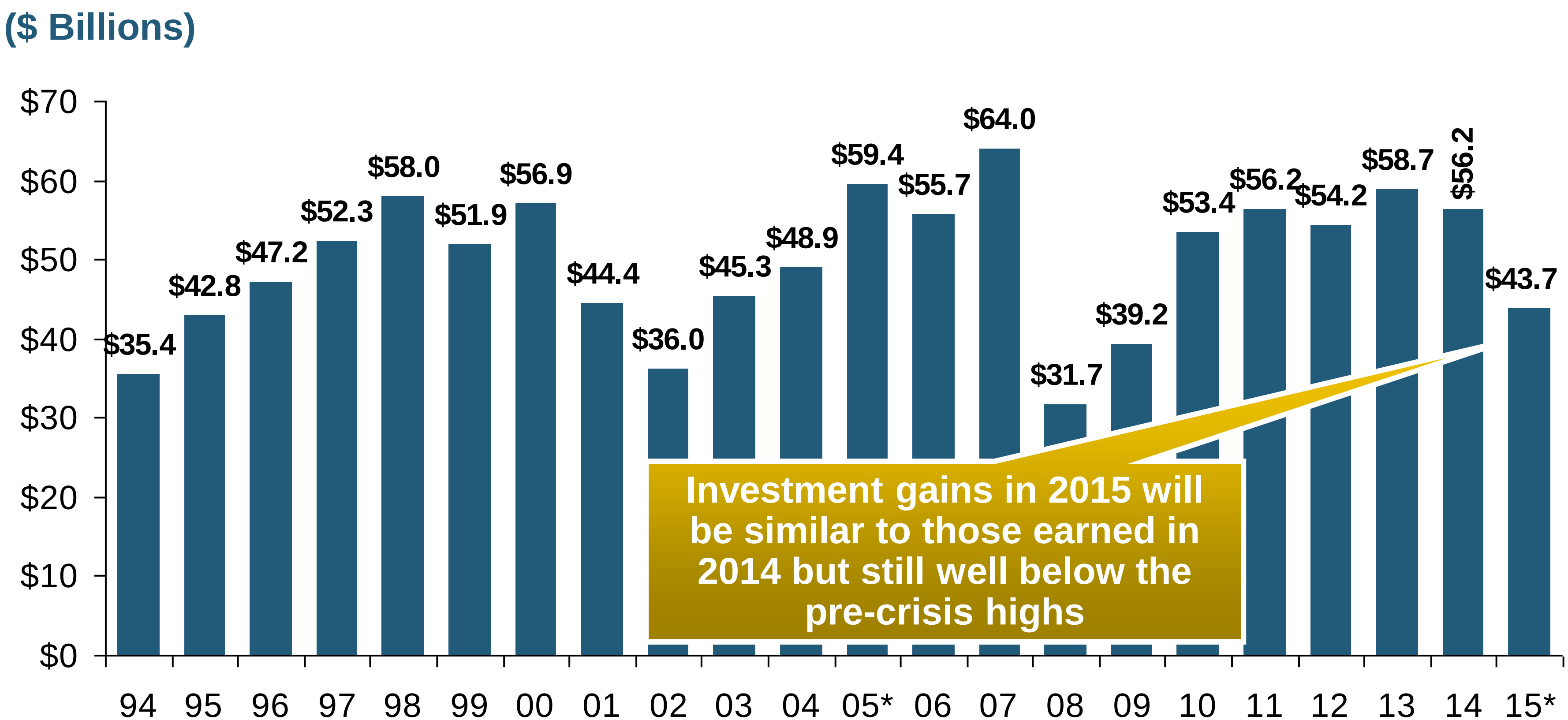
INSURANCE INFORMATION INSTITUTE



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 Q3 2015.
Sources: A.M. Best, ISO, SNL, Insurance Information Institute.

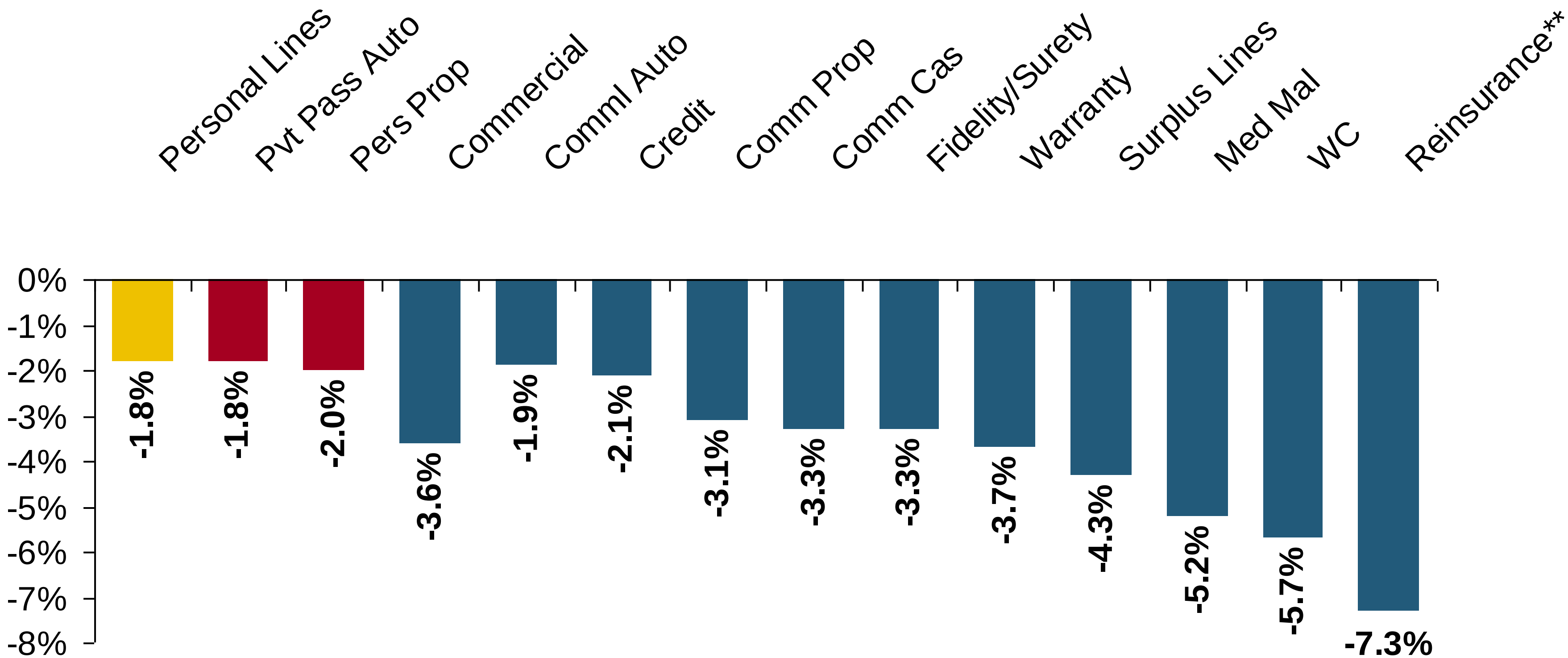
Property/Casualty Insurance Industry Investment Gain: 1994–2015:Q3[1]



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

[1] 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 Q3 2015.
Sources: ISO, SNL; Insurance Information Institute.

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



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

*Based on 2008 Invested Assets and Earned Premiums

**US domestic reinsurance only

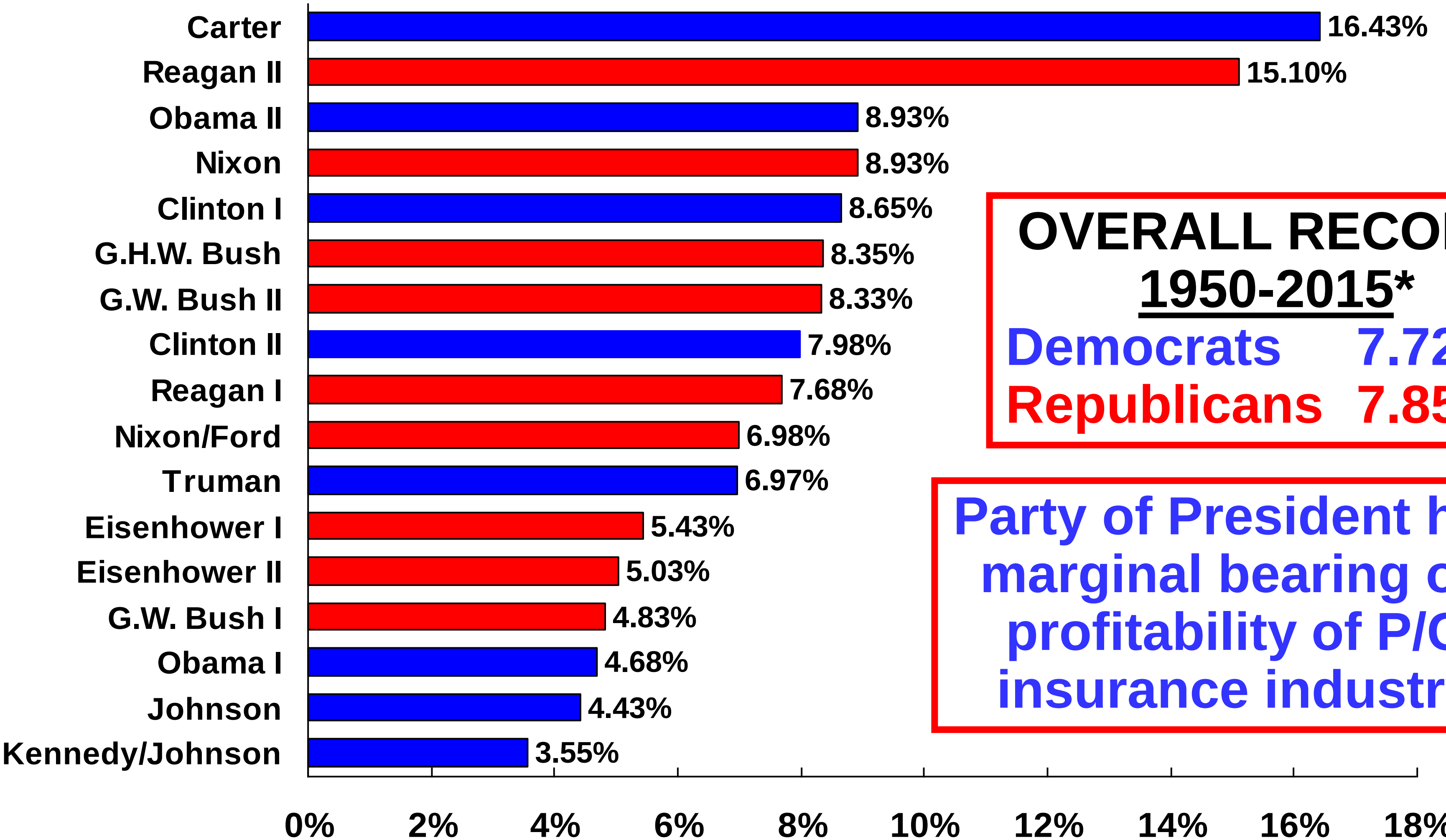
Source: A.M. Best; Insurance Information Institute.

Profitability & Politics

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

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

INSURANCE INFORMATION INSTITUTE



OVERALL RECORD: 1950-2015*

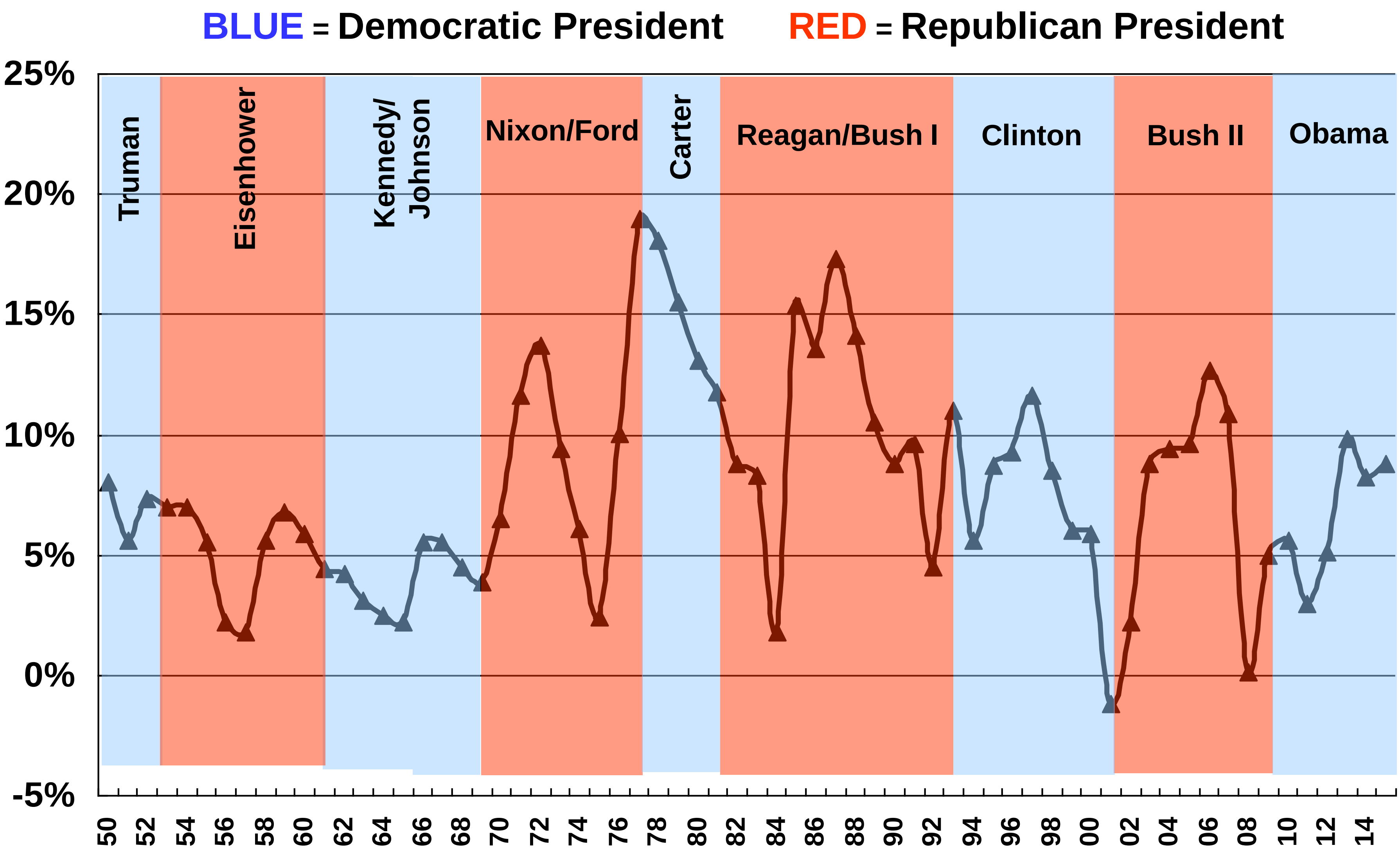
Democrats	7.72%
Republicans	7.85%

Party of President has marginal bearing on profitability of P/C insurance industry

*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- 2015*

INSURANCE INFORMATION INSTITUTE



*2015 data is through Q3.

Source: Insurance Information Institute

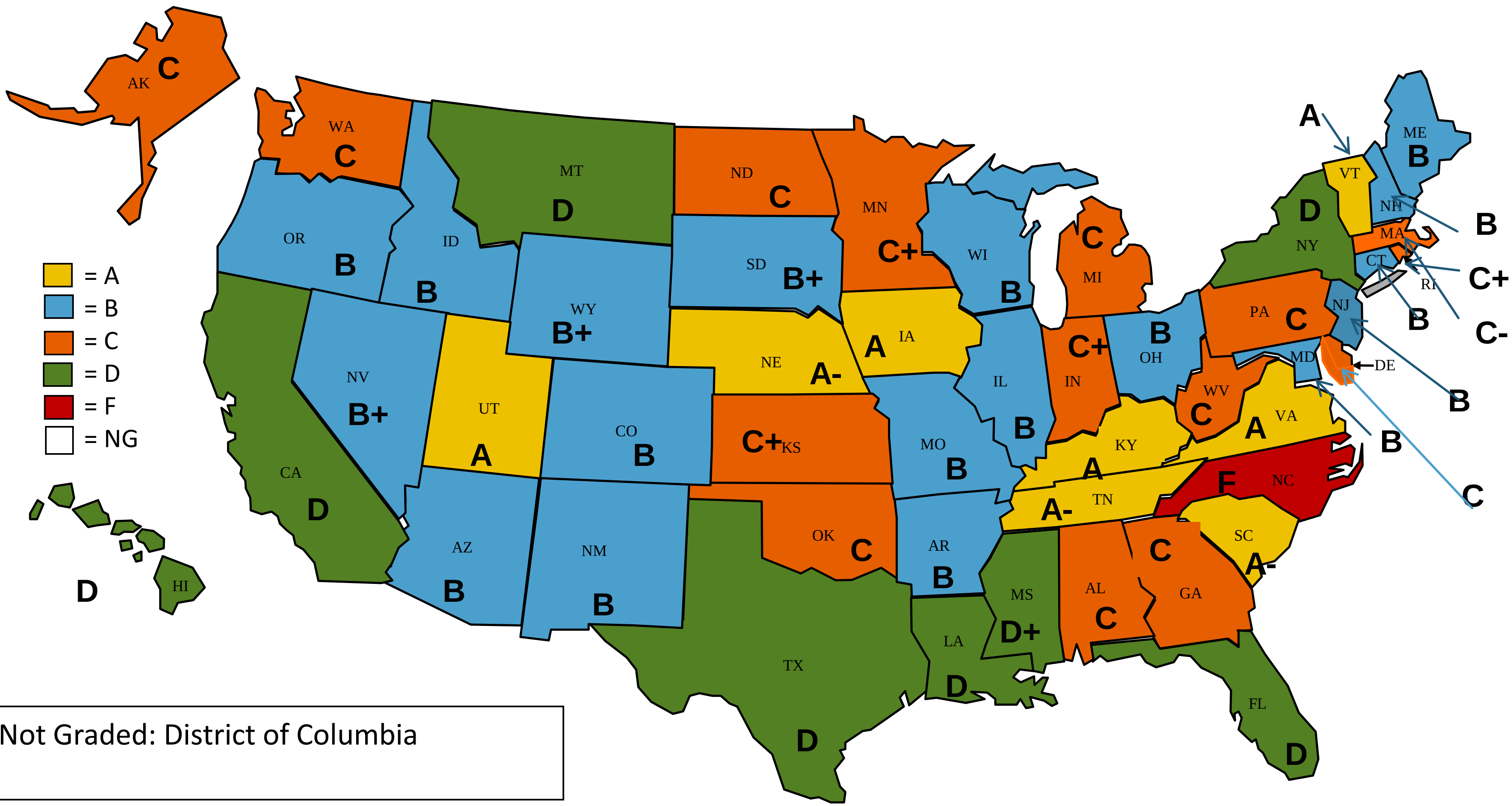
Trump vs. Clinton: Issues that Matter to P/C Insurers

INSURANCE INFORMATION INSTITUTE

Issue	Trump	Clinton
Economy	***Supply Side-Like Philosophy:*** Lower taxes→Faster real GDP growth; Deficits likely grow as tax cuts are combined with targeted increased spending on Homeland Security, Defense, etc.	***Keynesian Philosophy:*** More government spending on infrastructure, education, social services; Deficits likely increase as tax increases likely difficult to pass
Interest Rates	May trend higher with larger deficits; Shift from monetary policy to fiscal focus (tax cuts, government spending)	Status quo at the Fed; Net impact on interest rates unclear
Taxes	Favors lower tax rates for corporate and personal income tax rates; Tax code overhaul?	Unlikely to reduce taxes or embark on major overhaul of tax code
International Trade	Protectionist Tendencies (appeal primarily to manufacturing sector)	Has criticized Trans-Pacific Partnership but is a realist on international matters
Tort System	Doesn't like trial lawyers but seems to like filing lawsuits	Status Quo
Health Care	ACA should be repealed & replaced	Incremental Change

2015 Property and Casualty Insurance Regulatory Report Card

INSURANCE INFORMATION INSTITUTE



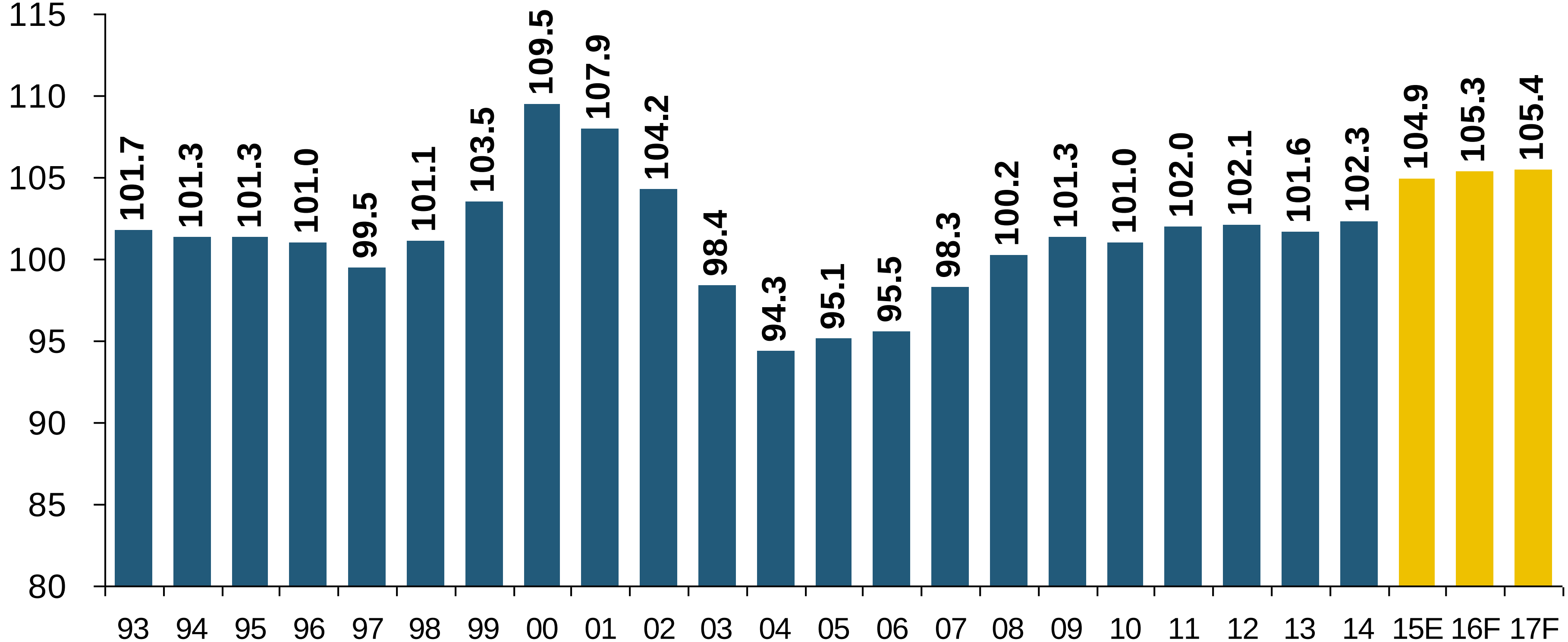
Not Graded: District of Columbia

Source: R Street Insurance Regulation Report Card, December 2015

Personal Lines Underwriting Performance

Auto, Home Underwriting Performance Exhibit Periods of Both Stability and Volatility

Private Passenger Auto Combined Ratio: 1993–2017F

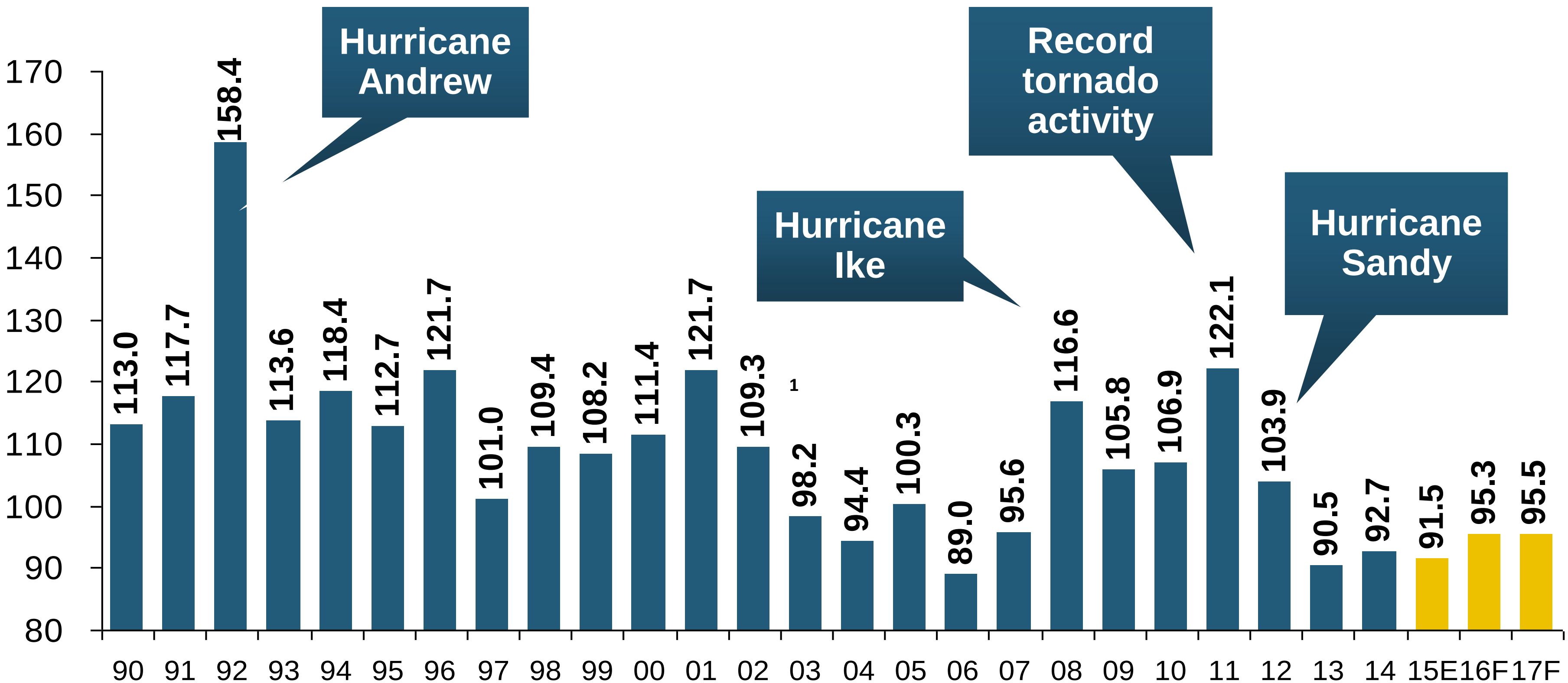


Private Passenger Auto Underwriting Performance Is Showing the Strains of Rising Frequency (and Severity) Trends in Many States

Sources: A.M. Best (1990-2014); Conning (2015E-17F); Insurance Information Institute.

Homeowners Insurance Combined Ratio: 1990–2017F

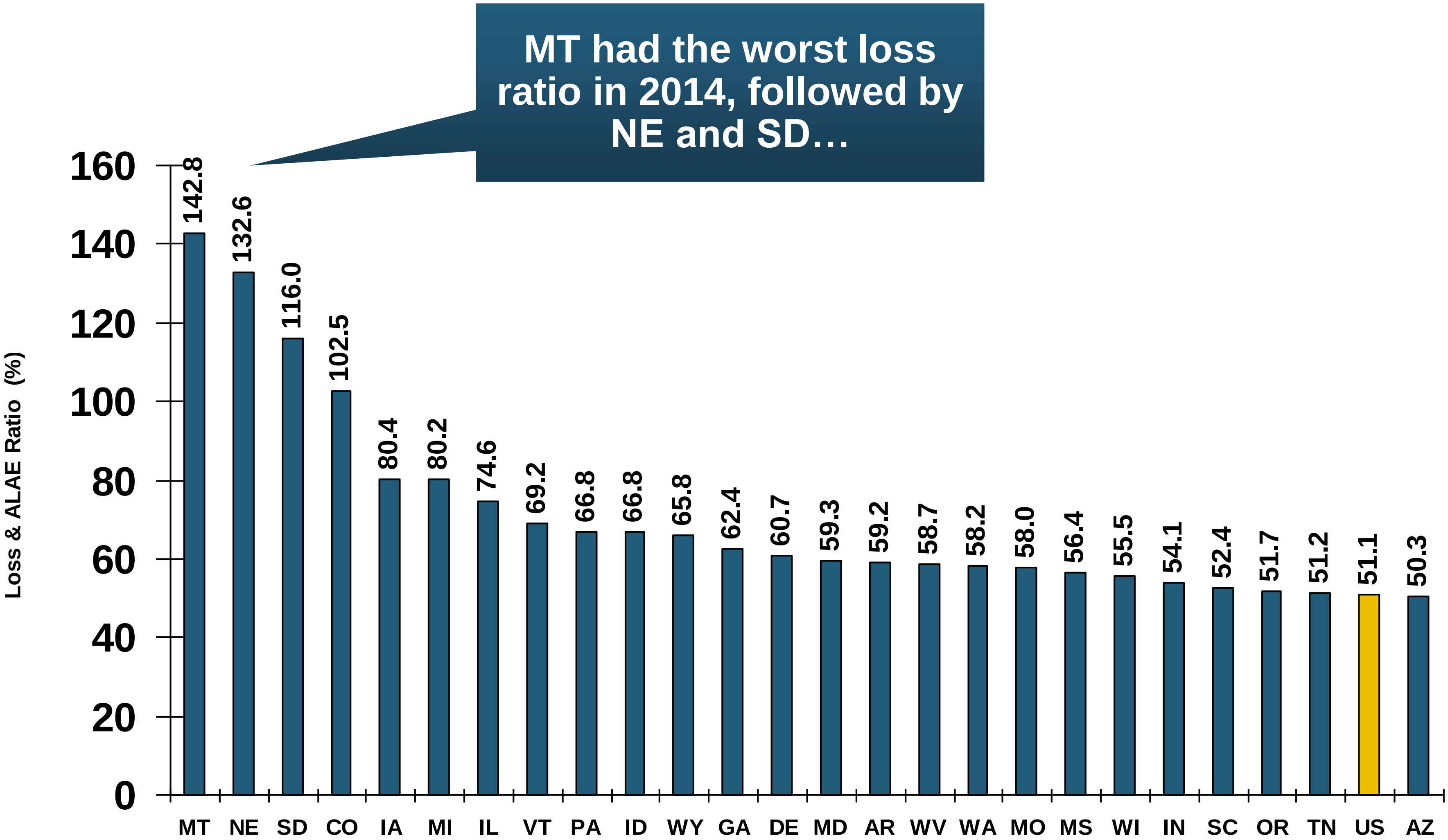
INSURANCE INFORMATION INSTITUTE



Homeowners Performance Has Improved Markedly Since the 2011/12's Large Cat Losses. Extreme Regional Variation Can Be Expected Due to Local Catastrophe Loss Activity. Results in 2016 Will Be Impacted by Severe Spring Weather

Sources: A.M. Best (1990-2014); Insurance Information Institute (2015E-17F).

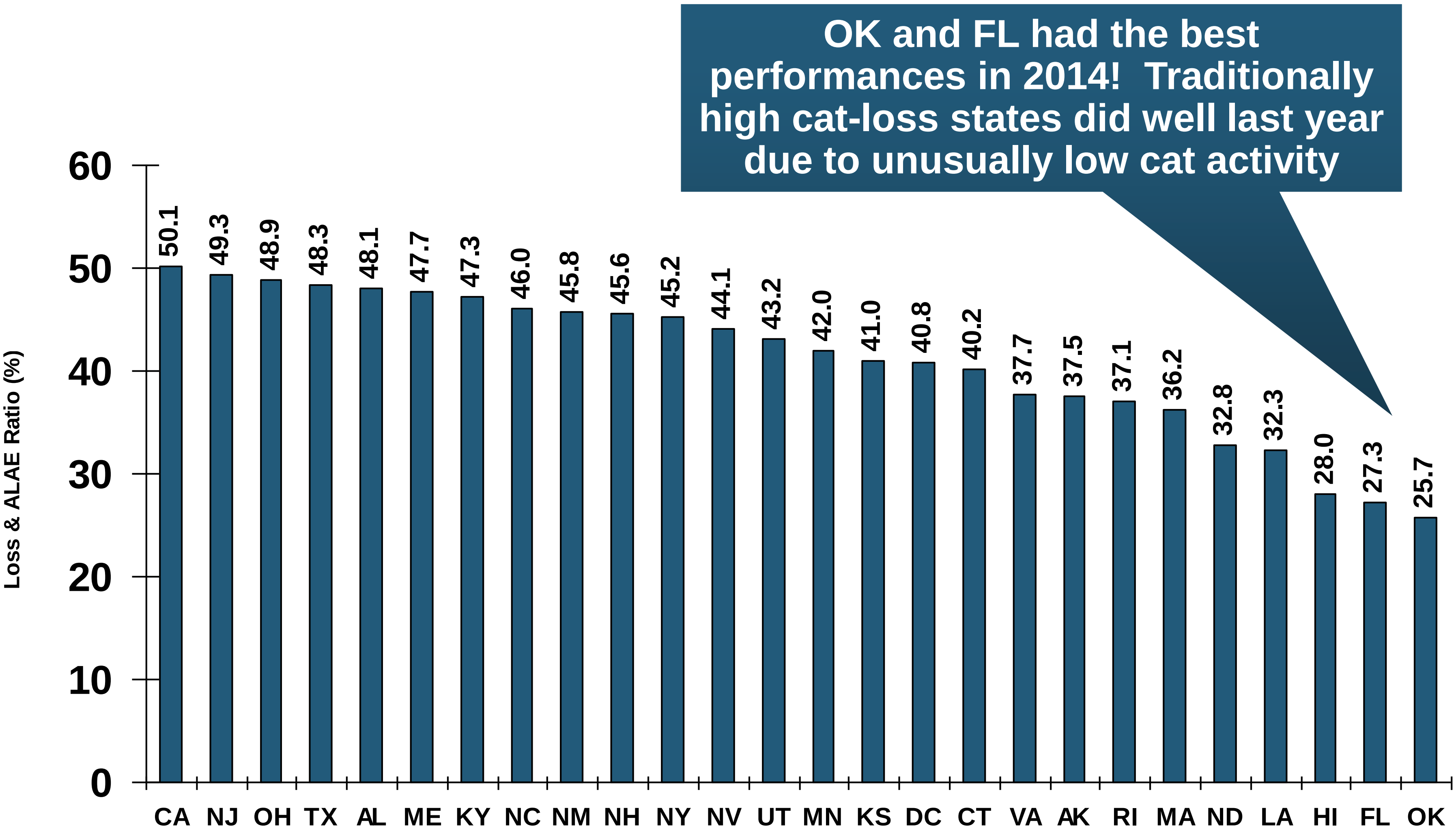
Homeowners Multi-Peril Loss & ALAE Ratio, 2014: Highest 25 States



Sources: SNL Financial; Insurance Information Institute.

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

INSURANCE INFORMATION INSTITUTE



Sources: SNL Financial; Insurance Information Institute.

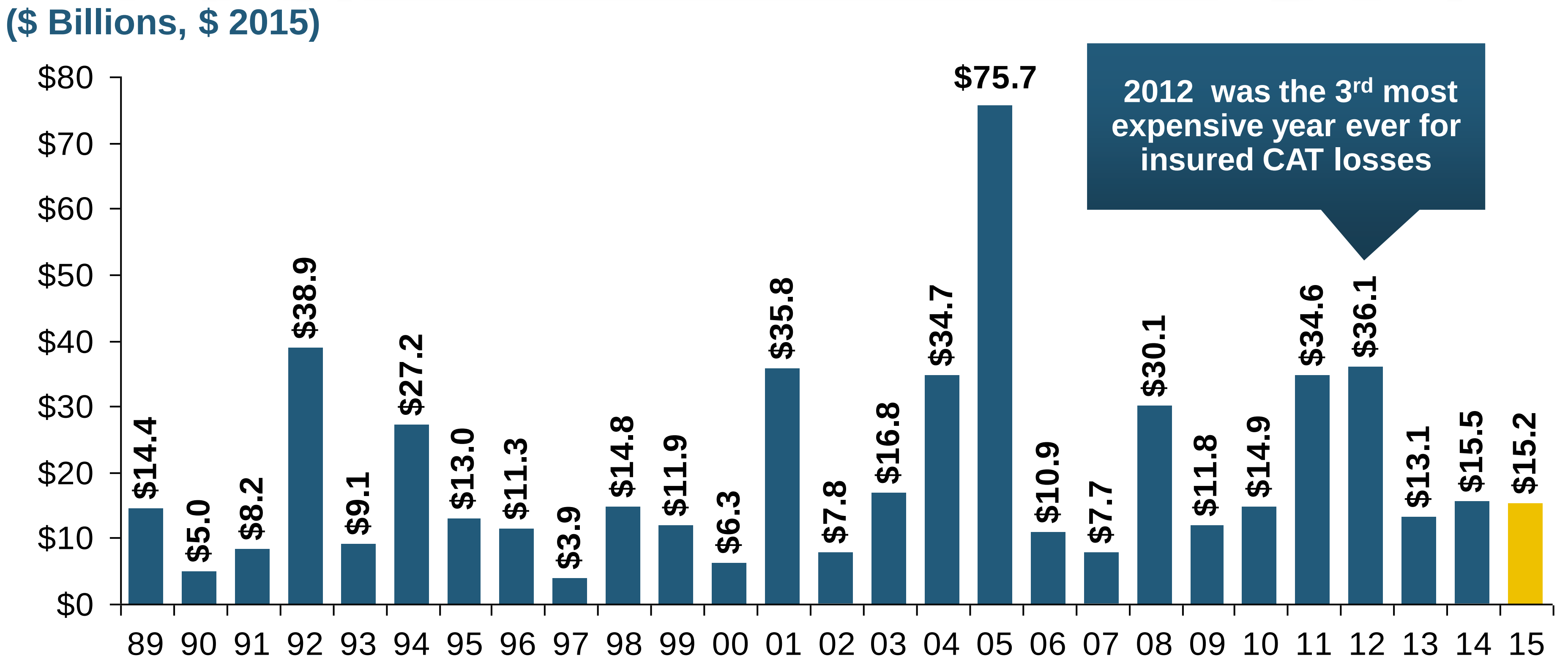
Insured Catastrophe Losses

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

INSURANCE INFORMATION INSTITUTE



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

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.

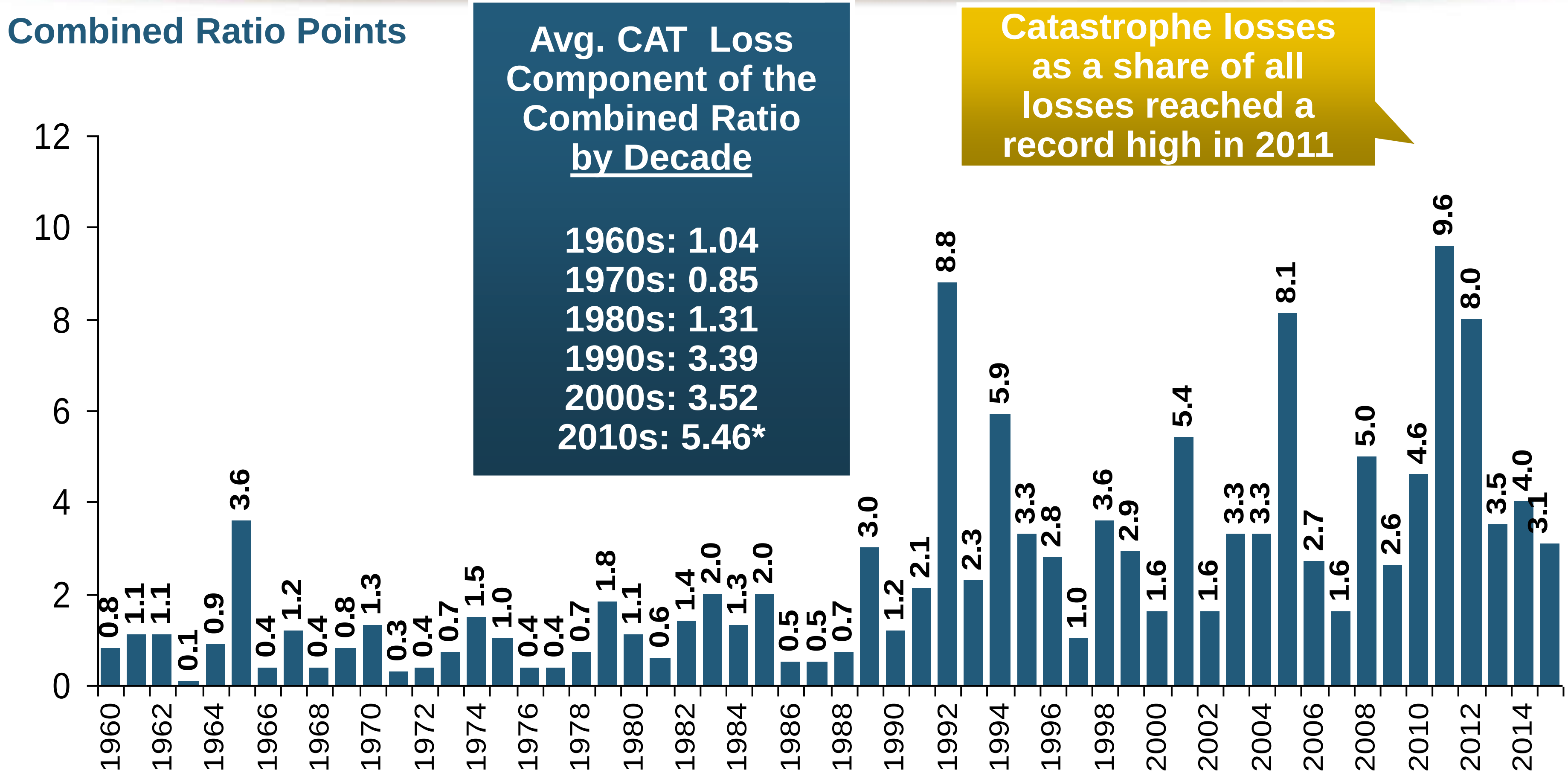
Combined Ratio Points Associated with Catastrophe Losses: 1960 – 2015E*

INSURANCE INFORMATION INSTITUTE

Avg. CAT Loss Component of the Combined Ratio by Decade

1960s: 1.04
1970s: 0.85
1980s: 1.31
1990s: 3.39
2000s: 3.52
2010s: 5.46*

Catastrophe losses as a share of all losses reached a record high in 2011



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

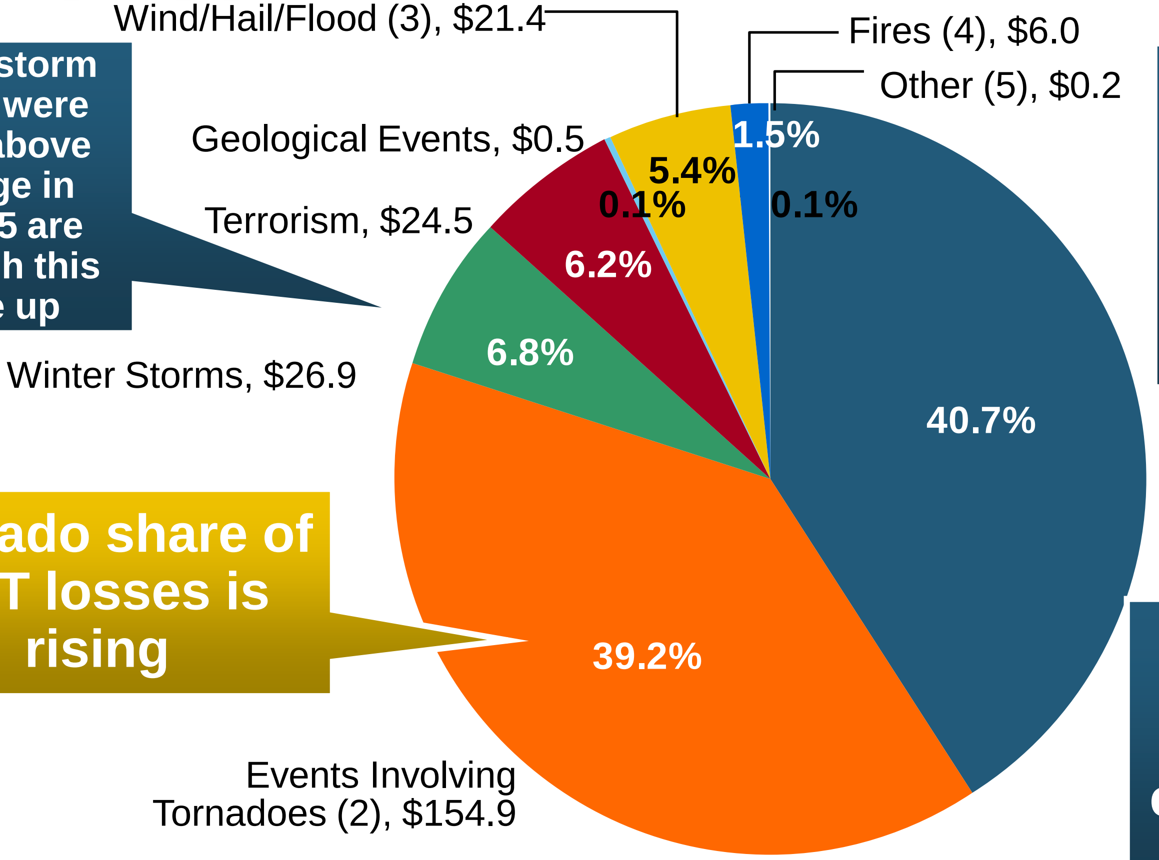
*2010s represent 2010-2015E.

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 (1960-2009); A.M. Best (2010-15E) Insurance Information Institute.

Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1995–2014[1]

INSURANCE INFORMATION INSTITUTE



Winter storm losses were much above average in 2014/15 are will push this share up

Insured cat losses from 1995-2014 totaled $395.6B, an average of $19.8B per year or $1.65B per month

Tornado share of CAT losses is rising

Wind losses are by far cause the most catastrophe losses, even if hurricanes/TS are excluded.

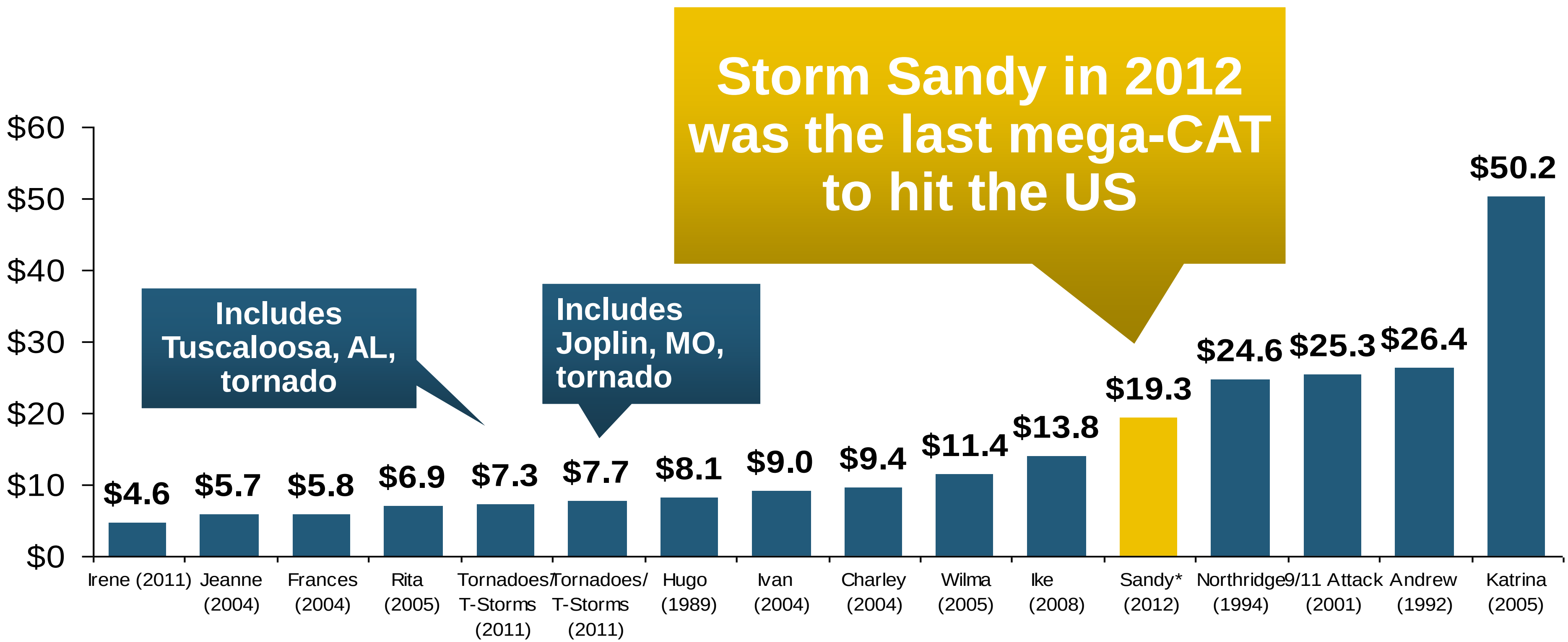
1. Catastrophes are defined as events causing direct insured losses to property of $25 million or more in 2014 dollars.
2. Excludes snow.
3. Does not include NFIP flood losses
4. Includes wildland fires
5. Includes civil disorders, water damage, utility disruptions and non-property losses such as those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

Source: ISO's Property Claim Services Unit.

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

INSURANCE INFORMATION INSTITUTE

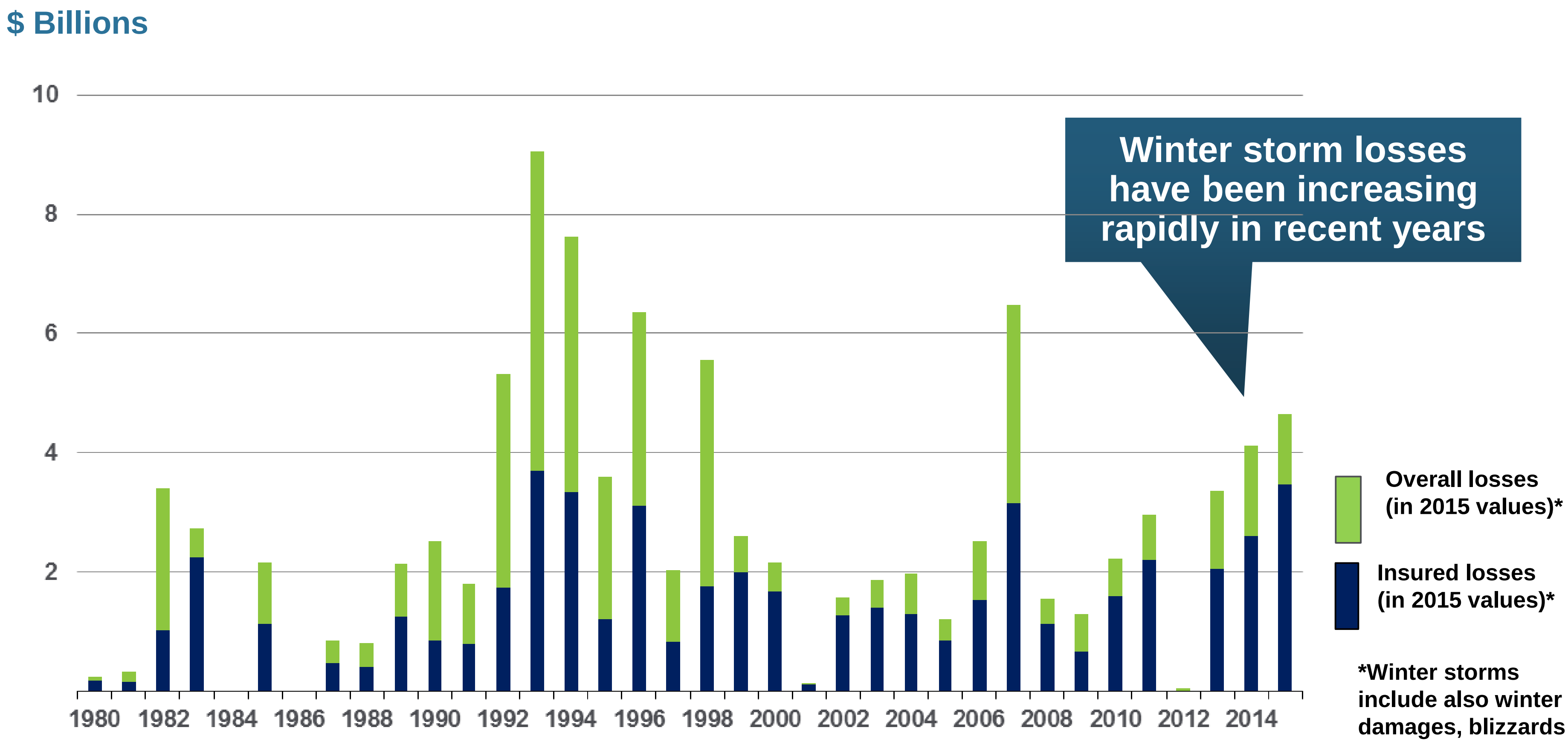
(Insured Losses, 2014 Dollars, $ Billions)



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

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

Winter Storm Losses in the US 1980 – 2015 (Overall and Insured Losses)*



*Winter storms include also winter damages, blizzards and cold waves

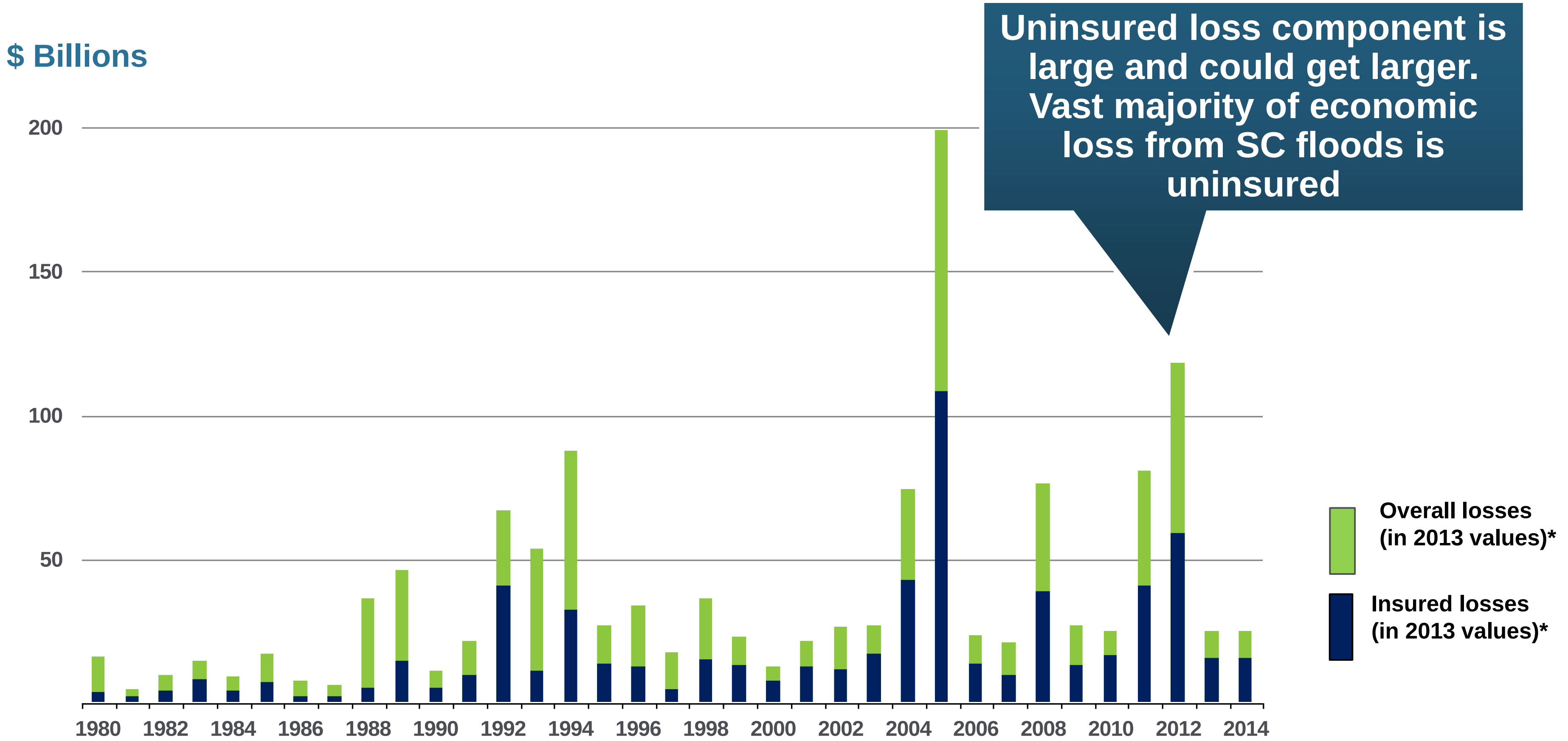
Source: Property Claim Services, MR NatCatSERVICE.

*Losses adjusted to inflation based on CPI.

Loss Events in the US, 1980 – 2014

Overall and Insured Losses

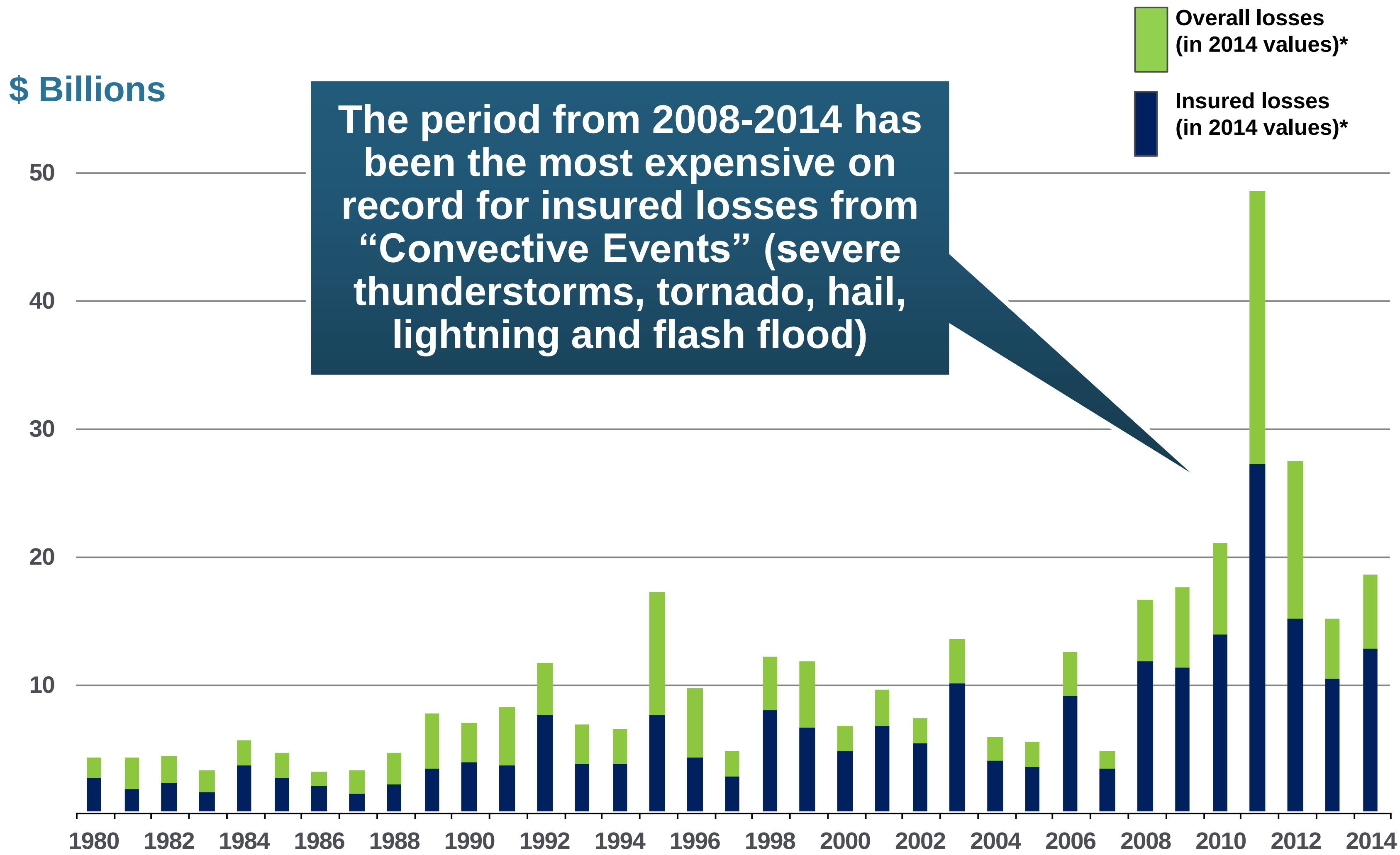
Overall losses totaled $25bn; Insured losses totaled $15.3bn



*Losses adjusted to inflation based on CPI.

Source: Property Claim Services, MR NatCatSERVICE.

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

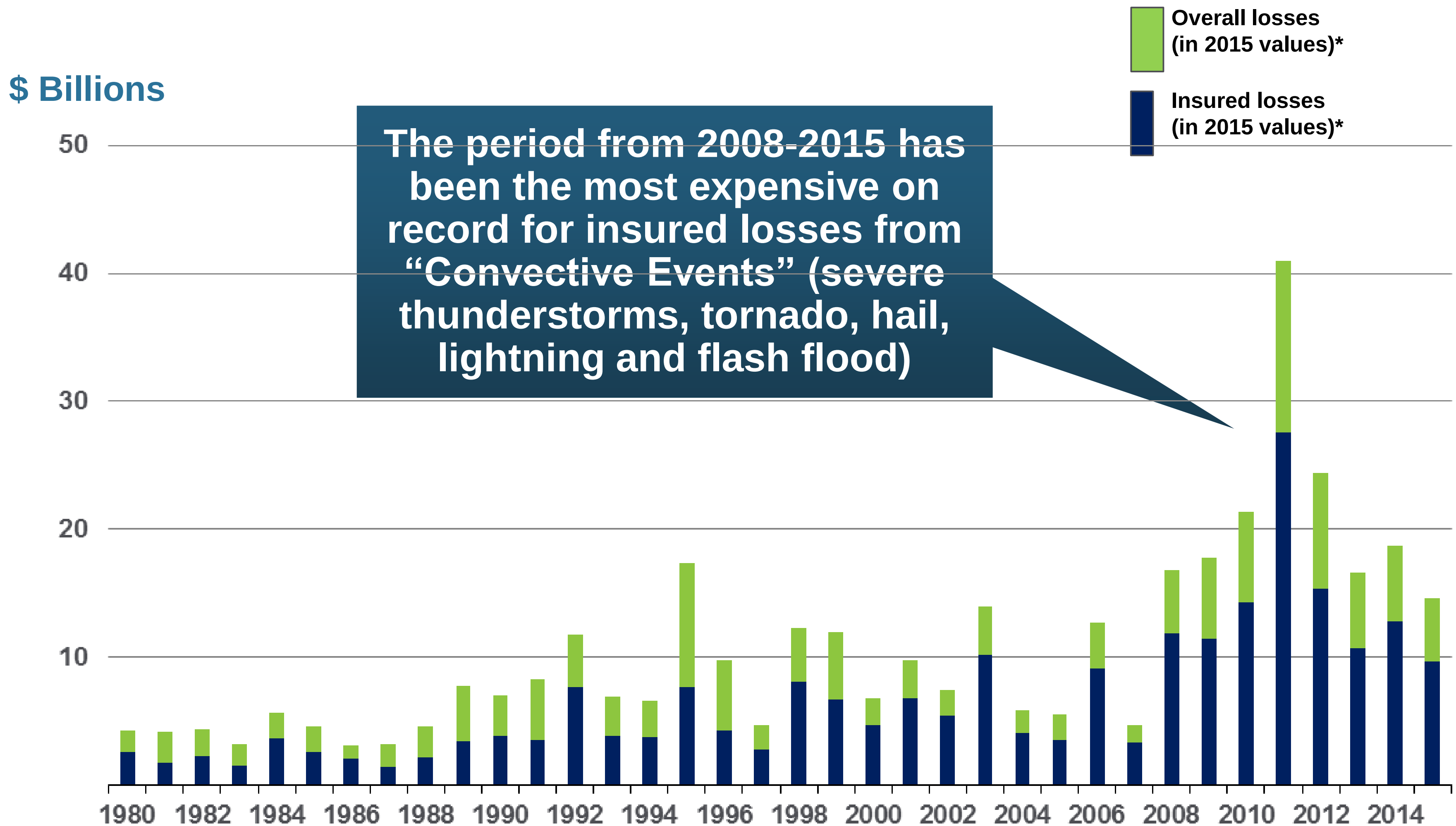


*Losses adjusted to inflation based on CPI

Source: Geo Risks Research, NatCatSERVICE

Analysis contains:
severe storm, tornado, hail, flash flood and lightning

Convective Loss Events in the US
Overall and insured losses, 1980 – 2015



*Losses adjusted to inflation based on CPI

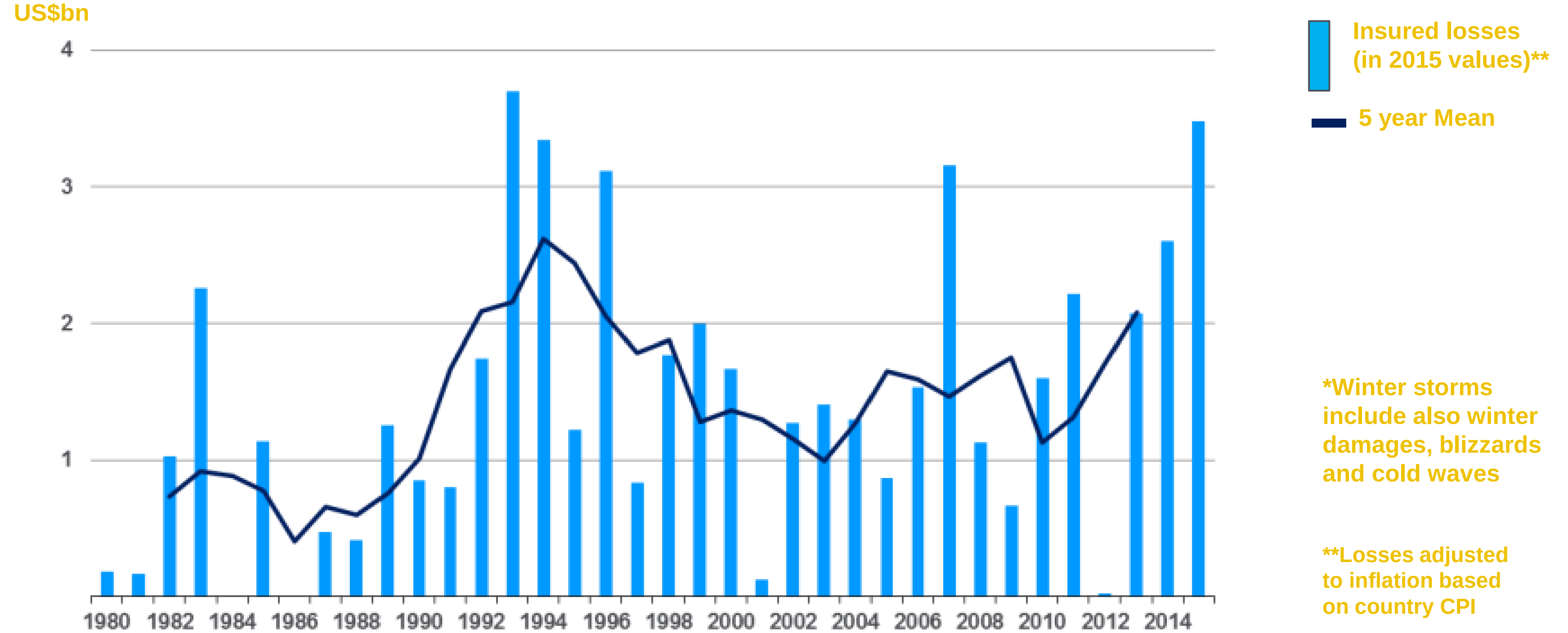
Source: Geo Risks Research, NatCatSERVICE

Analysis contains:
severe storm, tornado, hail, flash flood and lightning

NatCatSERVICE

Loss events in the U.S. 1980 – 2015

Insured losses of winter storms*



*Winter storms include also winter damages, blizzards and cold waves

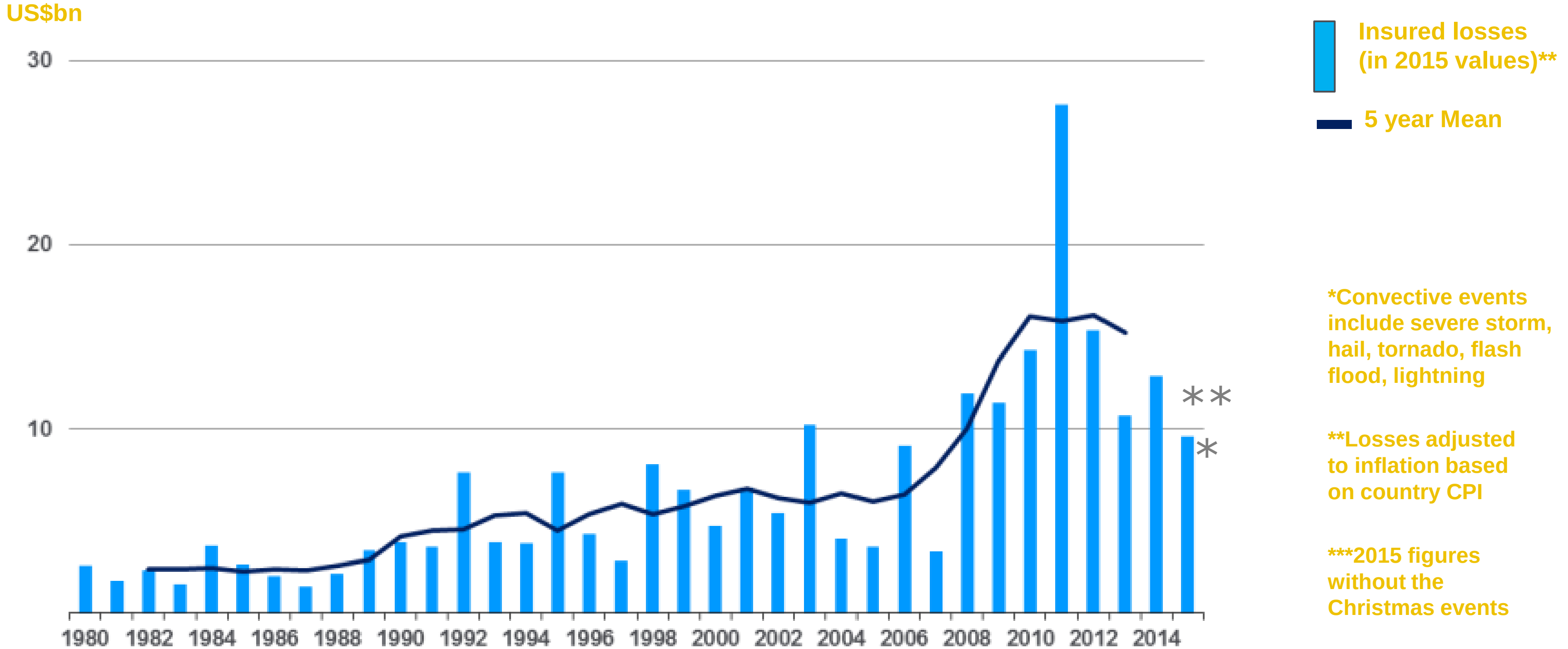
**Losses adjusted to inflation based on country CPI

Source: Munich Re NatCatSERVICE, Property Claim Services, PCS

NatCatSERVICE

Loss events in the U.S. 1980 – 2015

Insured losses of convective events*



Source: Munich Re NatCatSERVICE, Property Claim Services, PCS

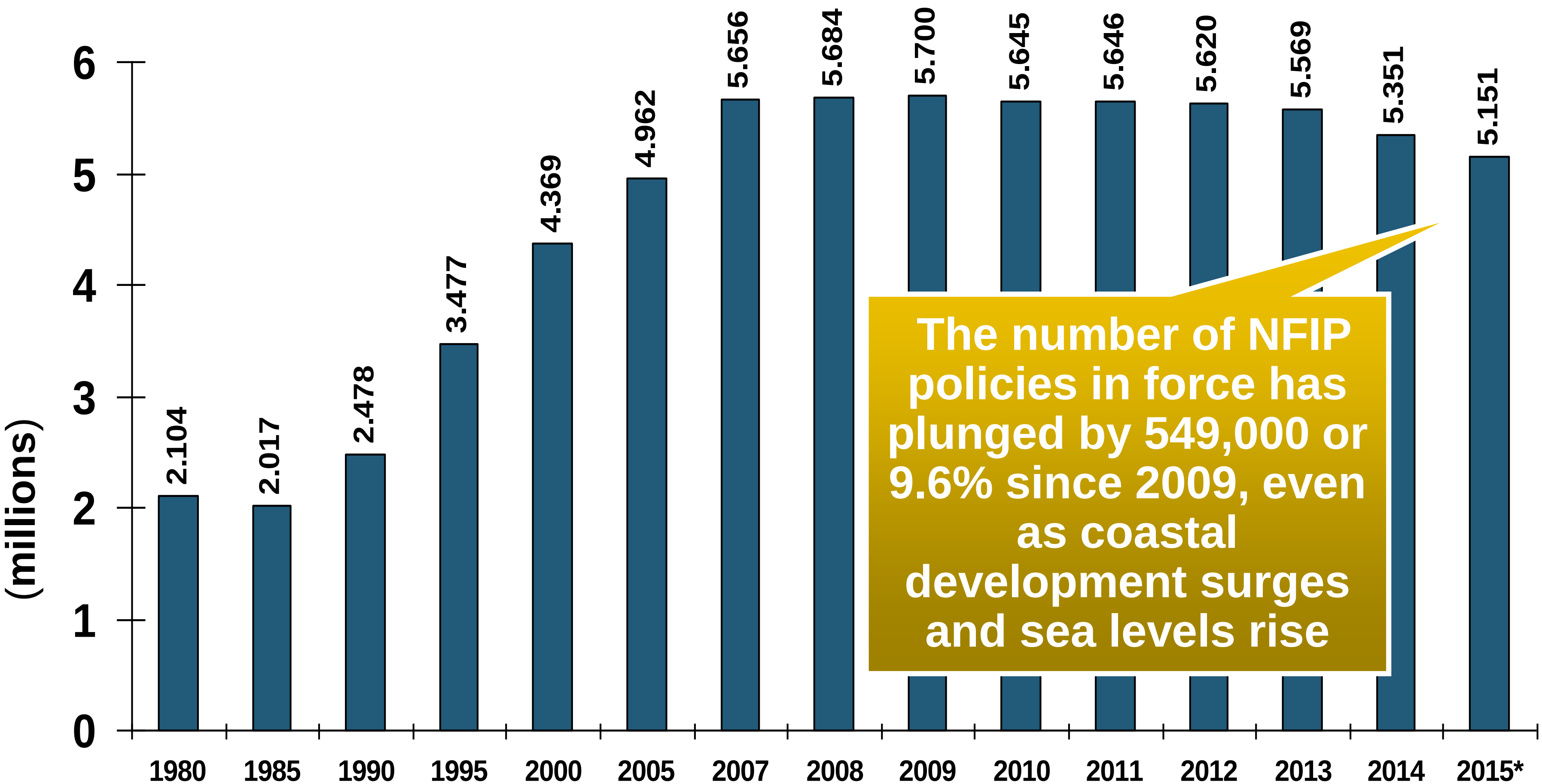
*Convective events include severe storm, hail, tornado, flash flood, lightning

**Losses adjusted to inflation based on country CPI

***2015 figures without the Christmas events

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

INSURANCE INFORMATION INSTITUTE

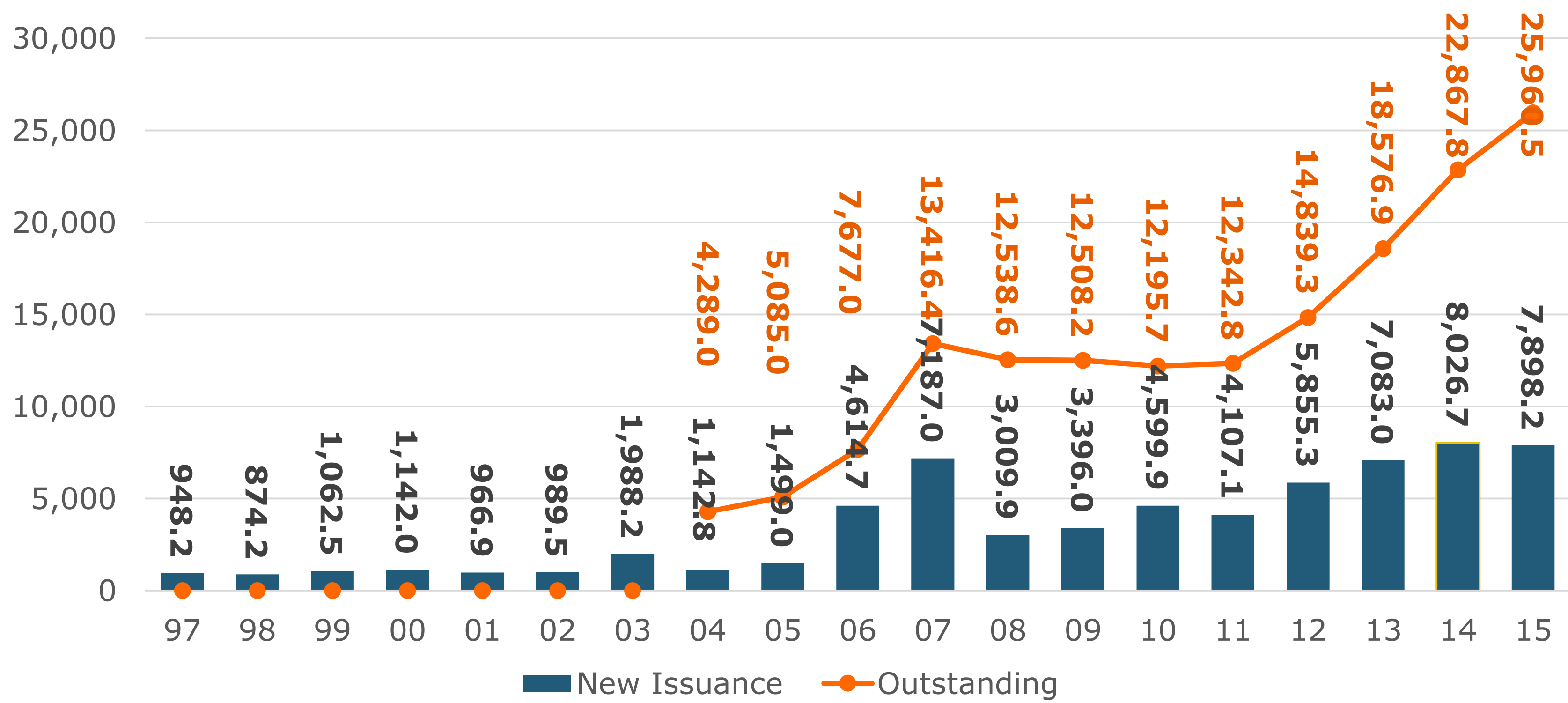


Source: National Flood Insurance Program.
* As of July, 2015

Catastrophe Bond Issuance and Outstanding: 1997-2015

INSURANCE INFORMATION INSTITUTE

Risk Capital Amount ($ Millions)

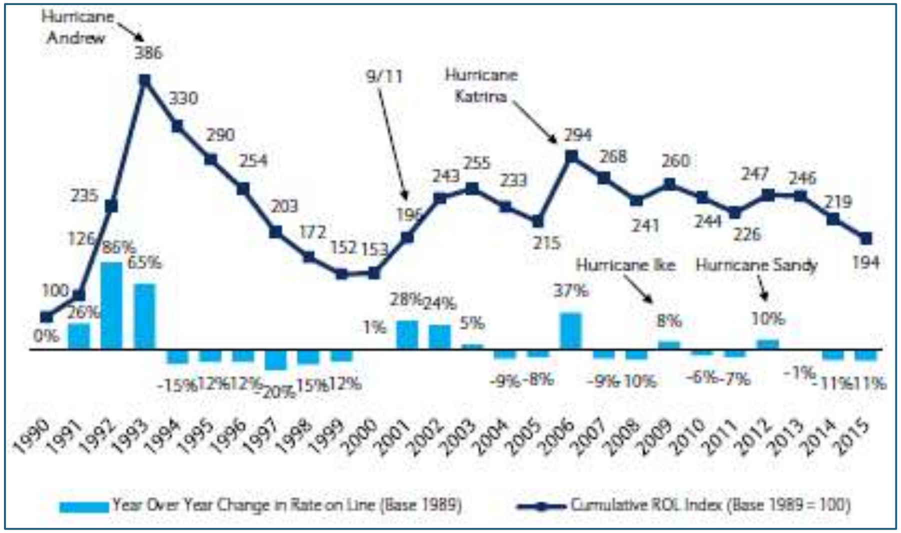


Cat Bond Issuance Declined Slightly in 2015 from 2014's Record Pace. Lower Yields on Bonds Explain Some of the Contraction.

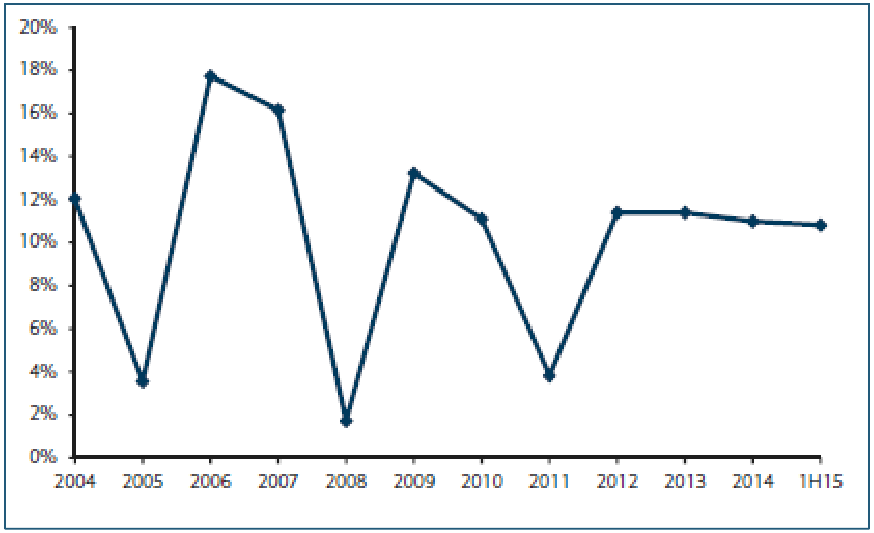
Source: Guy Carpenter, Artemis accessed at http://www.artemis.bm/deal_directory/cat_bonds_ils_issued_outstanding.html .

US Property CAT Rate on Line Index & Global Reinsurance ROE

US Property CAT ROL



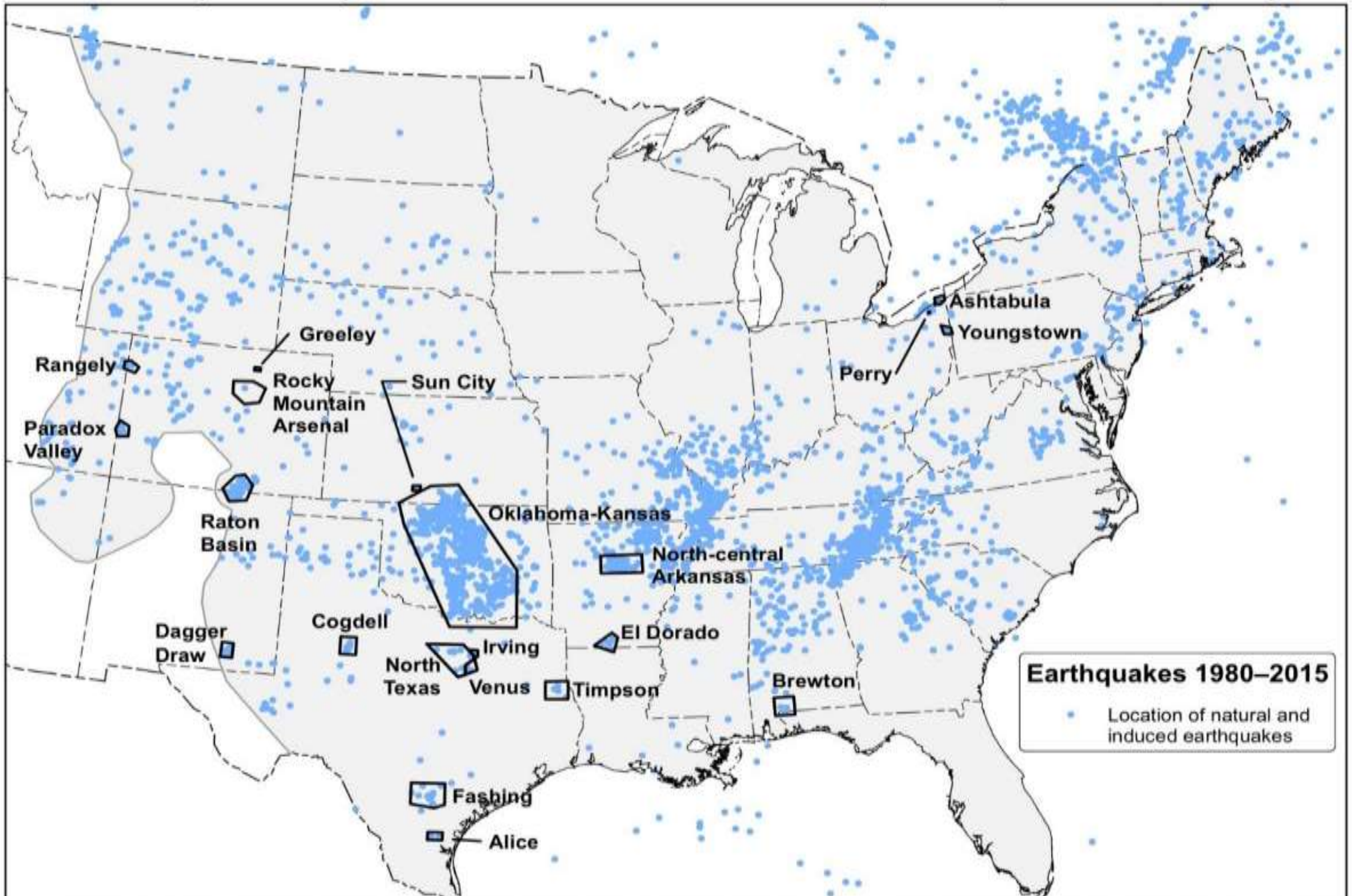
Global Reinsurance ROE



Record traditional capacity, alternative capital and low CAT activity have pressured reinsurance prices; ROEs are own only very modestly

Source: Barclays PLC from Guy Carpenter; Insurance Information Institute.

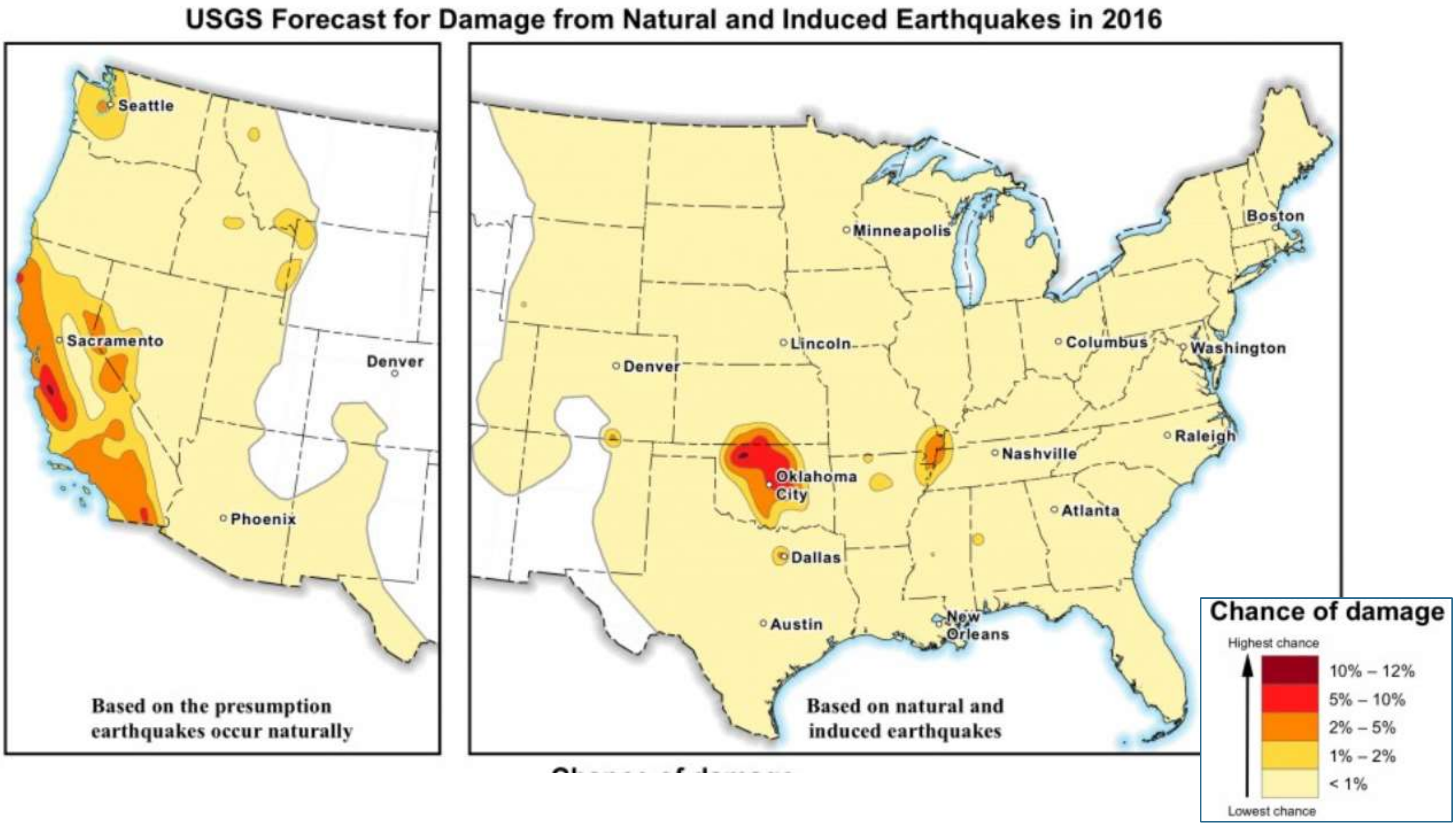
Earthquakes Since 1980 and Recent Area Impacted by Induced Seismicity



USGS map displaying 21 areas where scientists have observed rapid changes in seismicity that have been associated with wastewater injection. The map also shows earthquakes—both natural and induced—recorded from 1980 to 2015 in the central and eastern U.S. with a magnitude greater than or equal to 2.5.

Sources: http://www.usgs.gov/blogs/features/usgs_top_story/induced-earthquakes-raise-chances-of-damaging-shaking-in-2016/?from=title; Insurance Information Institute.

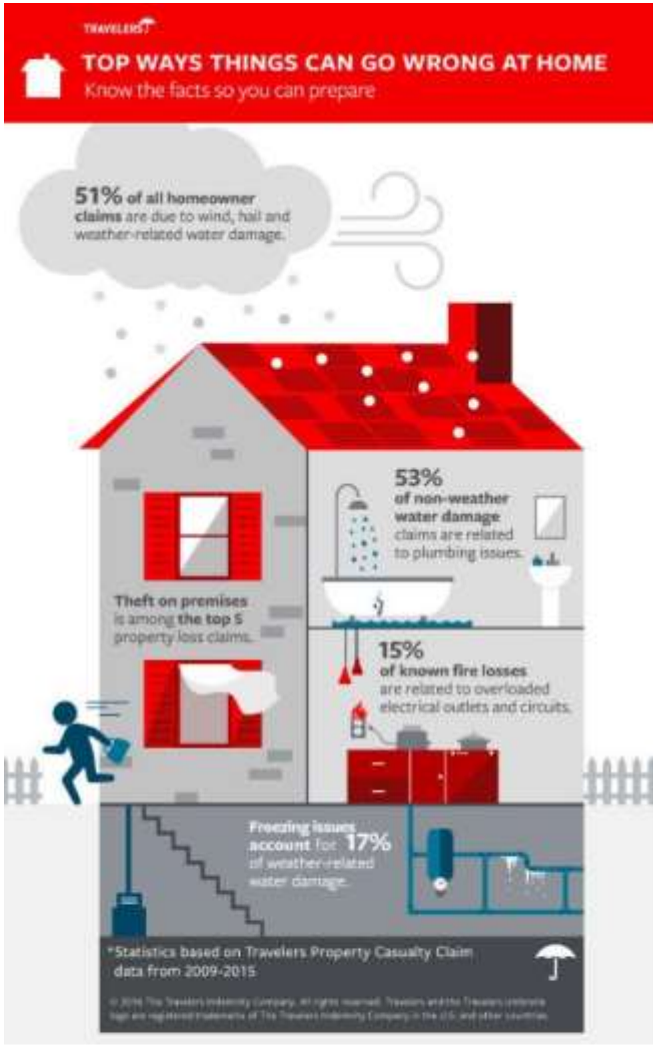
2016 Natural and Induced Earthquake Damage Forecast



Sources: USGS at http://www.usgs.gov/blogs/features/usgs_top_story/induced-earthquakes-raise-chances-of-damaging-shaking-in-2016/?from=title; Insurance Information Institute.

Effective Use of Data, Infographics to Get Out a Key Message

INSURANCE INFORMATION INSTITUTE



Top 5 Most Common Causes of Homeowners Insurance Claims

- Exterior wind damage – 25 percent of all losses.
- Non-weather-related water damage (e.g., plumbing or appliance issues) – 19 percent.
- Hail – 15 percent.
- Weather-related water damage (e.g., rain, melting ice, snow) – 11 percent.
- Theft – 6 percent.

Sources: Travelers; Infographic accessed at: http://mms.businesswire.com/media/20160406005833/en/517883/5/Home_Dangers_Infographic_Final.jpg?download=1

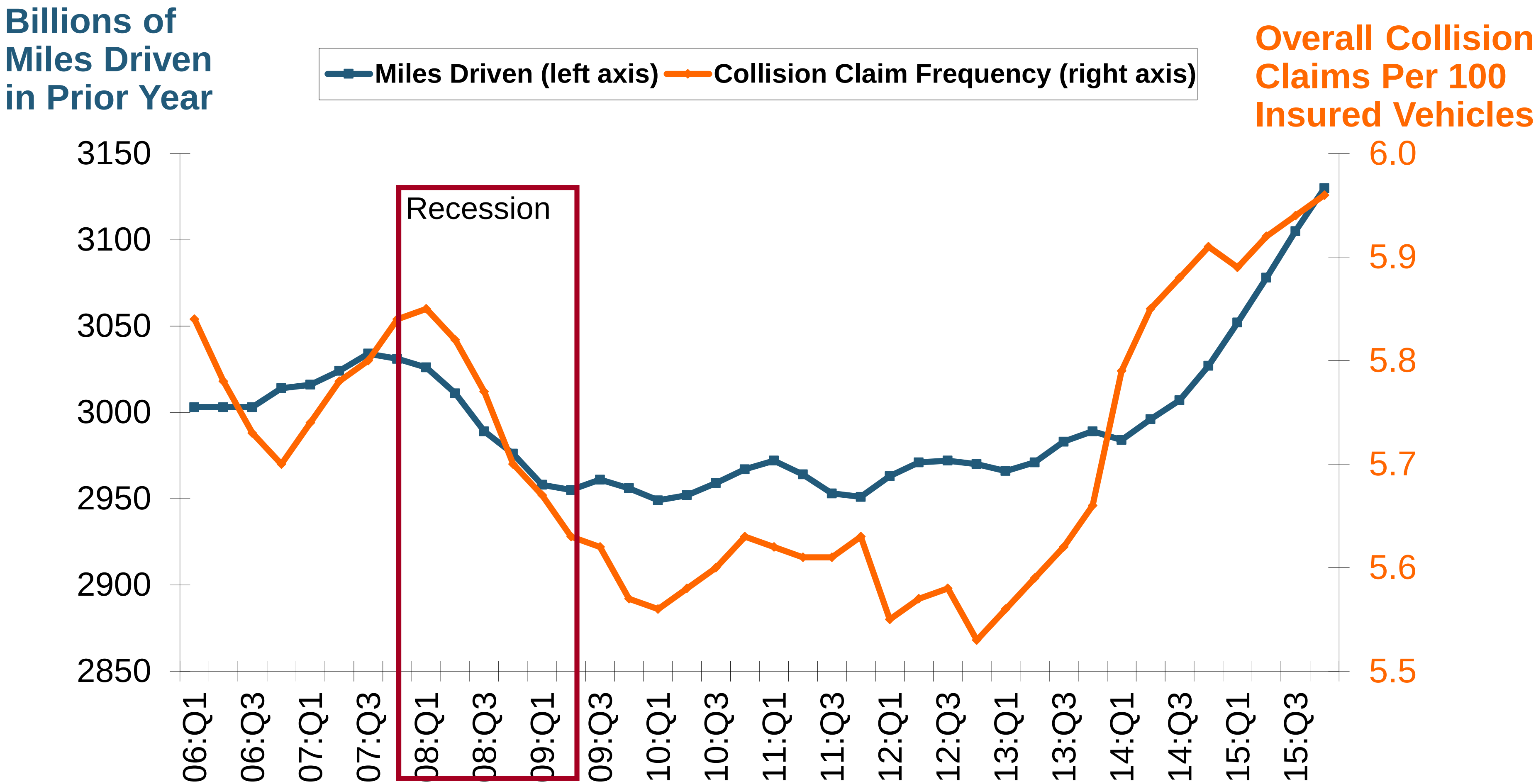
INSURANCE INFORMATION INSTITUTE

A Few Factors Driving Adverse Private Passenger Auto Loss Trends

More People Driving, Lower Gas Prices, Higher Speed Limits…

More Miles Driven => More Collisions, 2006–2015:Q4

INSURANCE INFORMATION INSTITUTE

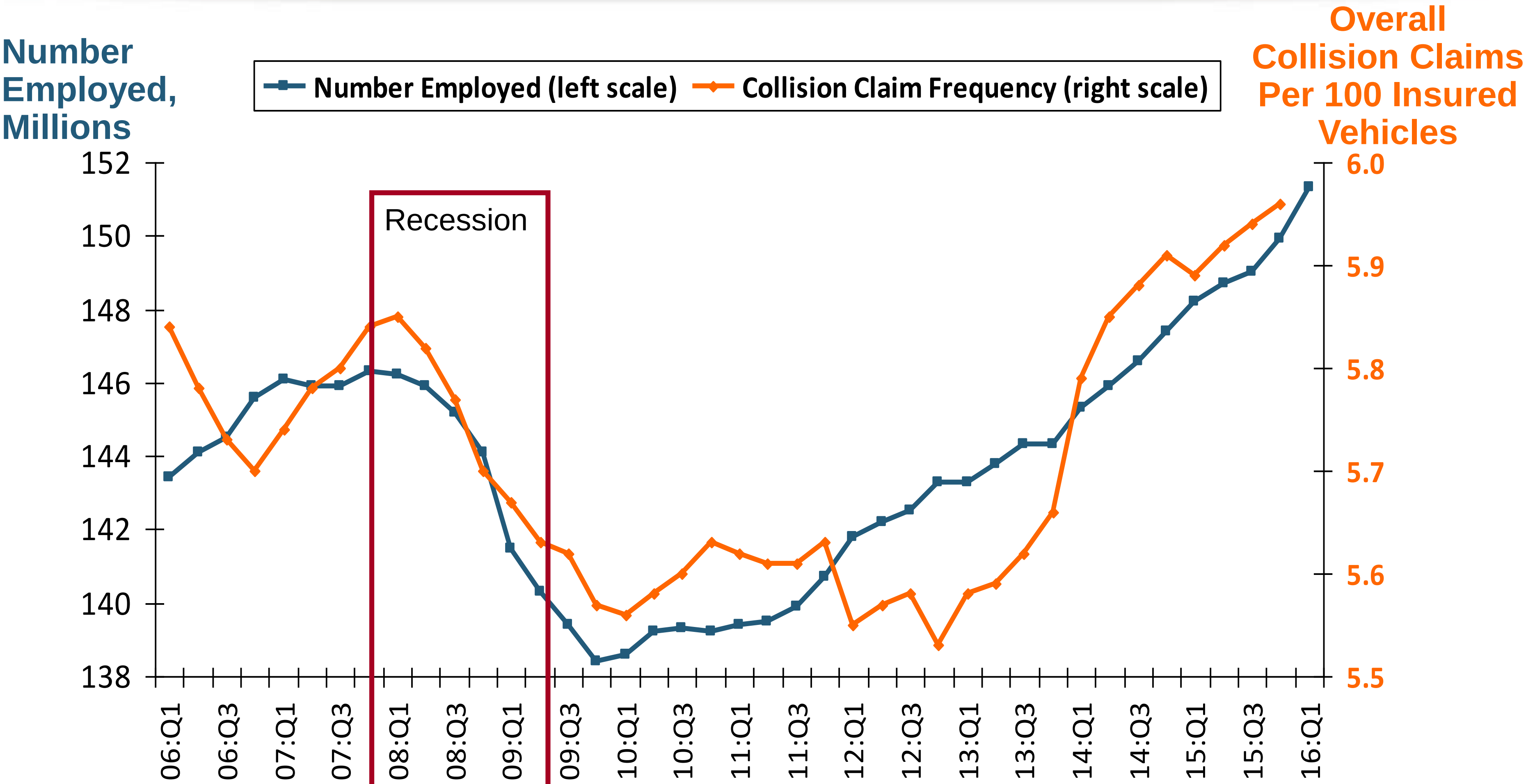


The more miles people drive, the more likely they are to get in an accident, helping drive claim frequency higher.

Sources: Federal Highway Administration (http://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm); Rolling Four-Qtr Avg. Frequency from Insurance Services Office; Insurance Institute for Highway Safety; Insurance Information Institute.

More People Working and Driving => More Collisions, 2006-2016

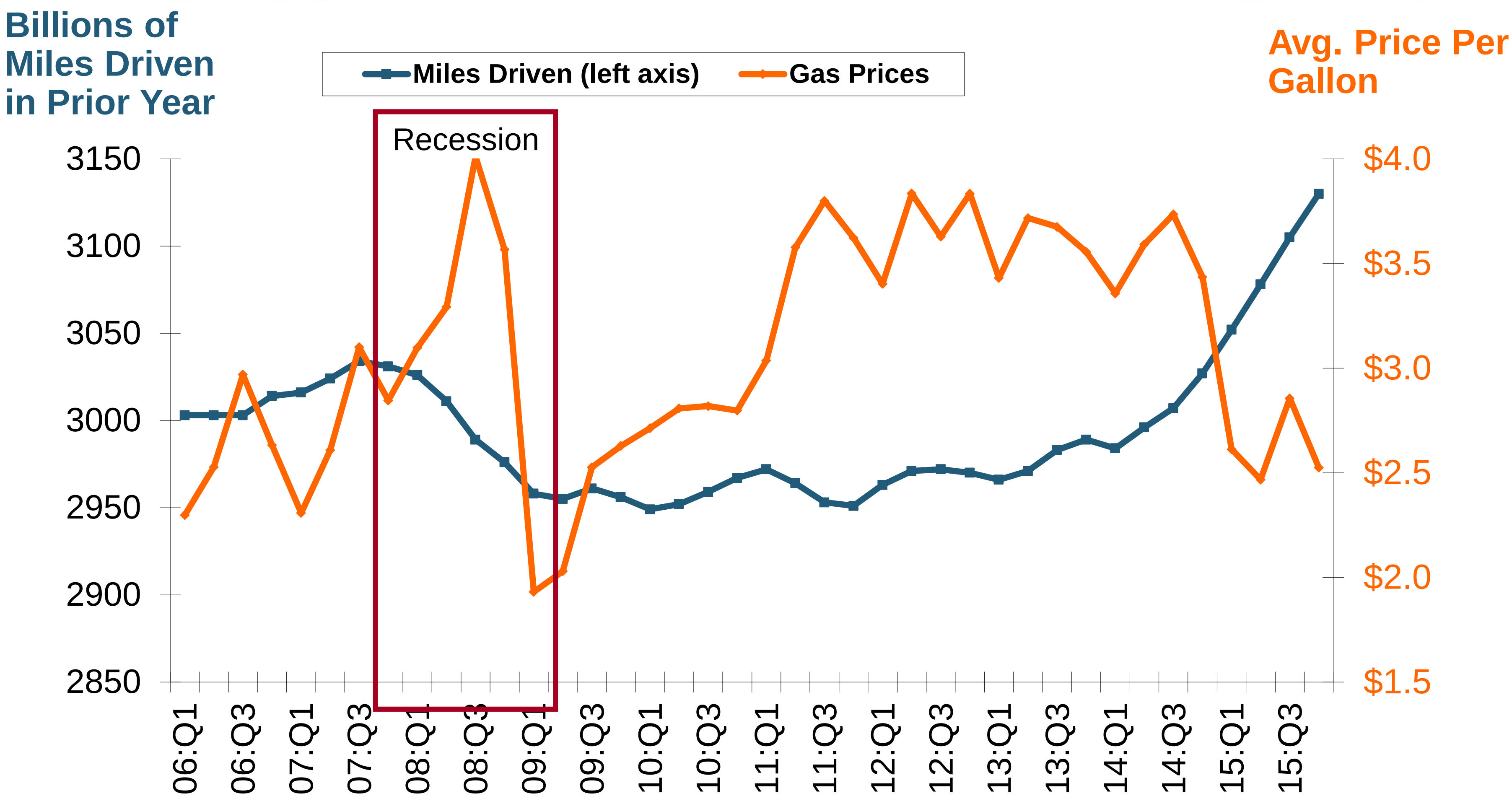
INSURANCE INFORMATION INSTITUTE



When people are out of work, they drive less. When they get jobs, they drive to work, helping drive claim frequency higher.

Sources: Seasonally Adjusted Employed from Bureau of Labor Statistics; Rolling Four-Qtr Avg. Frequency from Insurance Services Office; Insurance Information Institute.

Why Are People Driving More Miles? Cheap Gas?

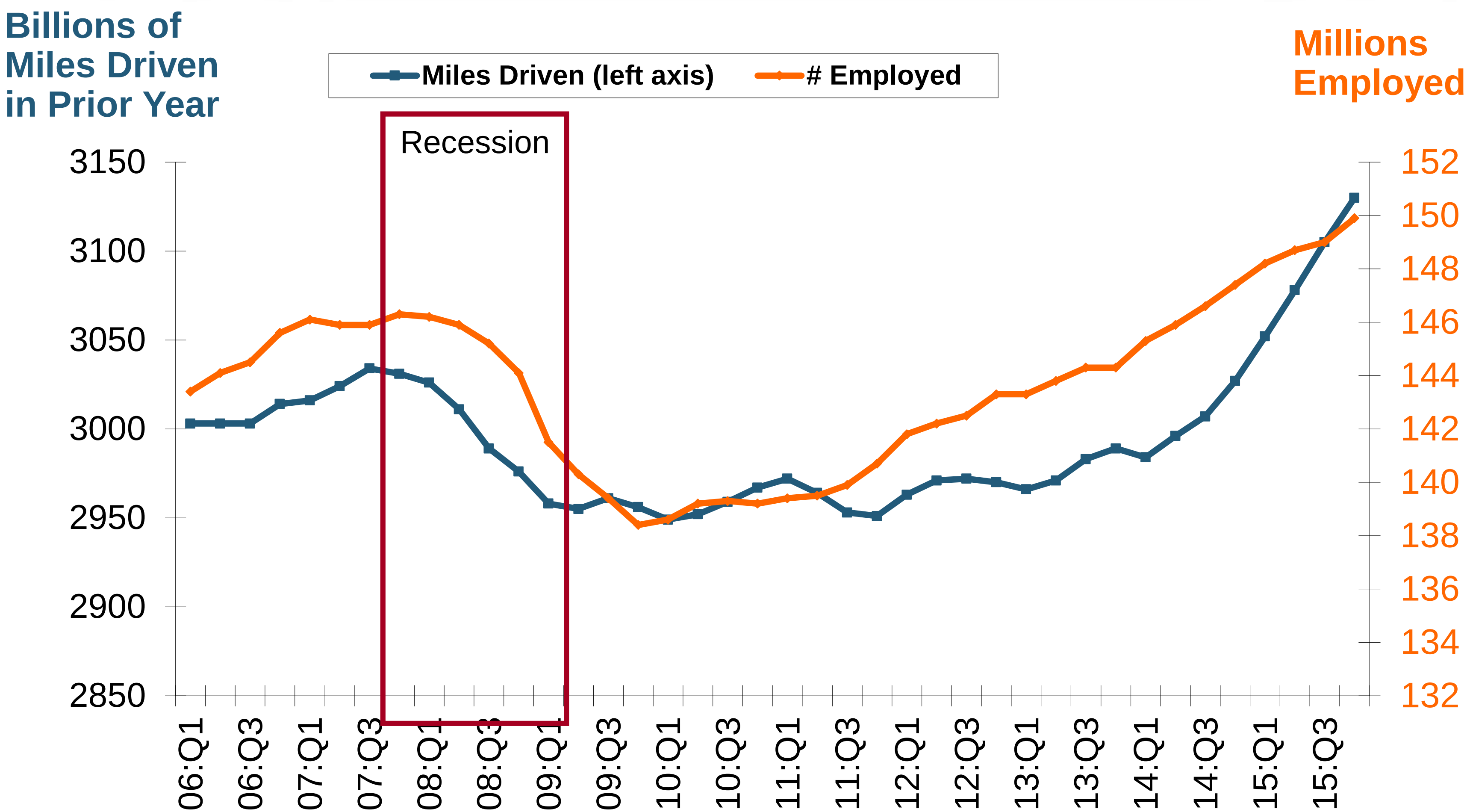


Gas Prices Don't Seem Correlated With Miles Driven.

Sources: Federal Highway Administration (http://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm); Energy Information Administration; Insurance Institute for Highway Safety; Insurance Information Institute.

Why Are People Driving More Miles? Jobs?

INSURANCE INFORMATION INSTITUTE

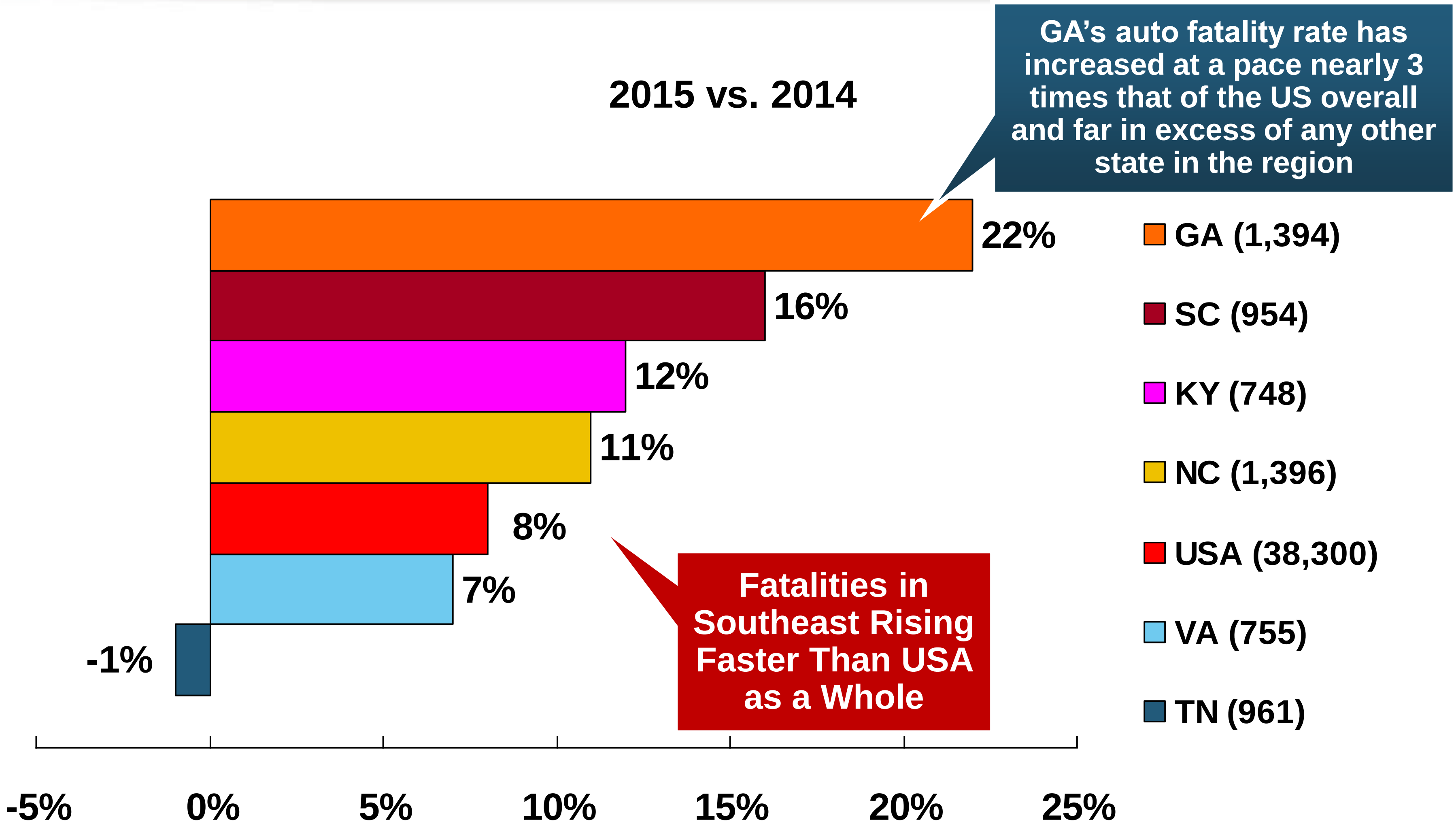


People Drive To and From Work and Drive to Entertainment. Out of Work, They Curtail Their Movement.

Sources: Federal Highway Administration (http://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm); Seasonally Adjusted Employed from Bureau of Labor Statistics; Insurance Institute for Highway Safety; Insurance Information Institute.

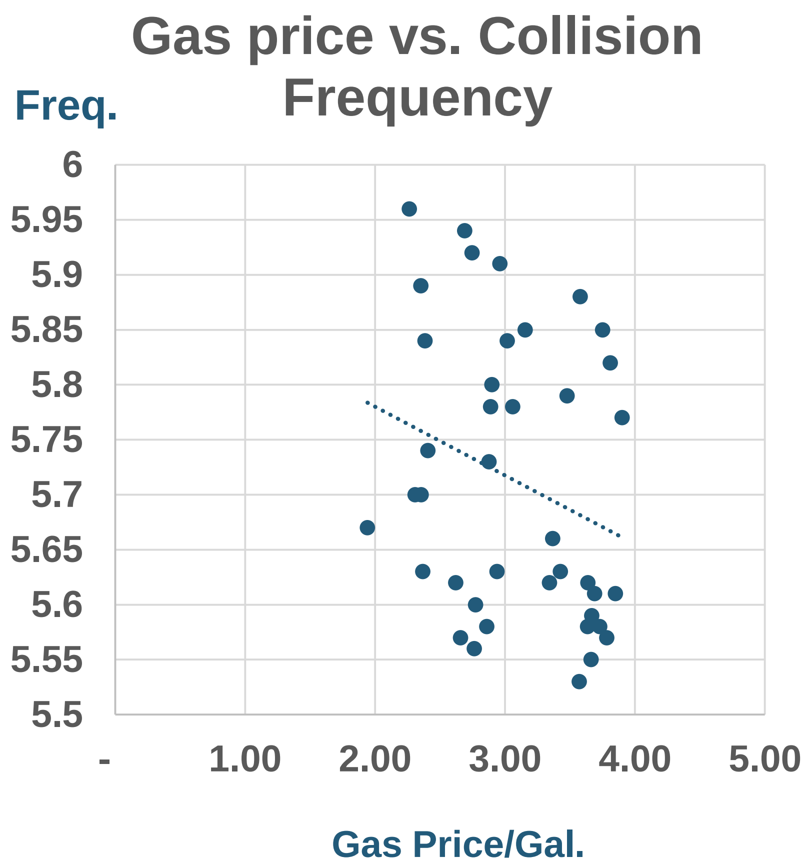
Change in Auto Fatalities by State: Especially Severe in Georgia

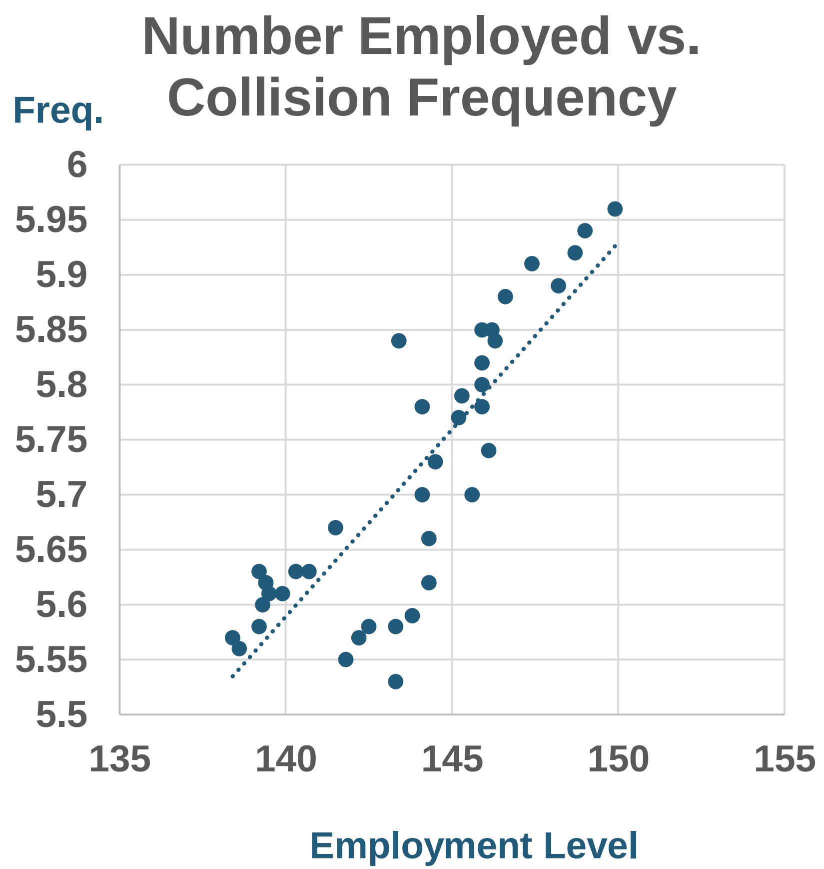
INSURANCE INFORMATION INSTITUTE



SOURCE: Estimates from National Safety Council.

Comparing Gas Prices, Employment on Collision Frequency

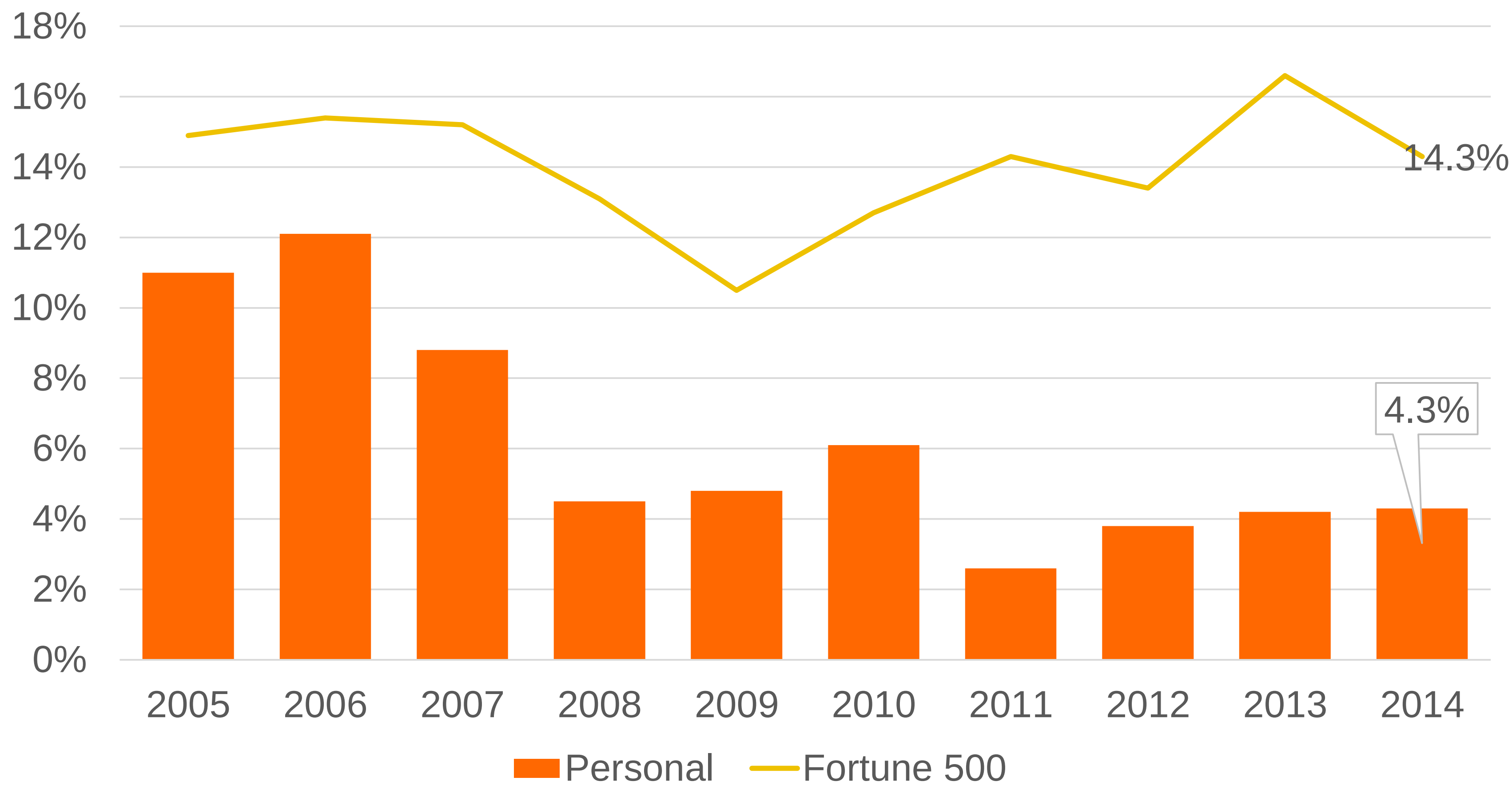




Sources: Seasonally Adjusted Employed from Bureau of Labor Statistics; Energy Information Administration; Rolling Four-Qtr Avg. Frequency from Insurance Services Office; Insurance Information Institute.

Return on Net Worth: Personal Auto, 2005-2014

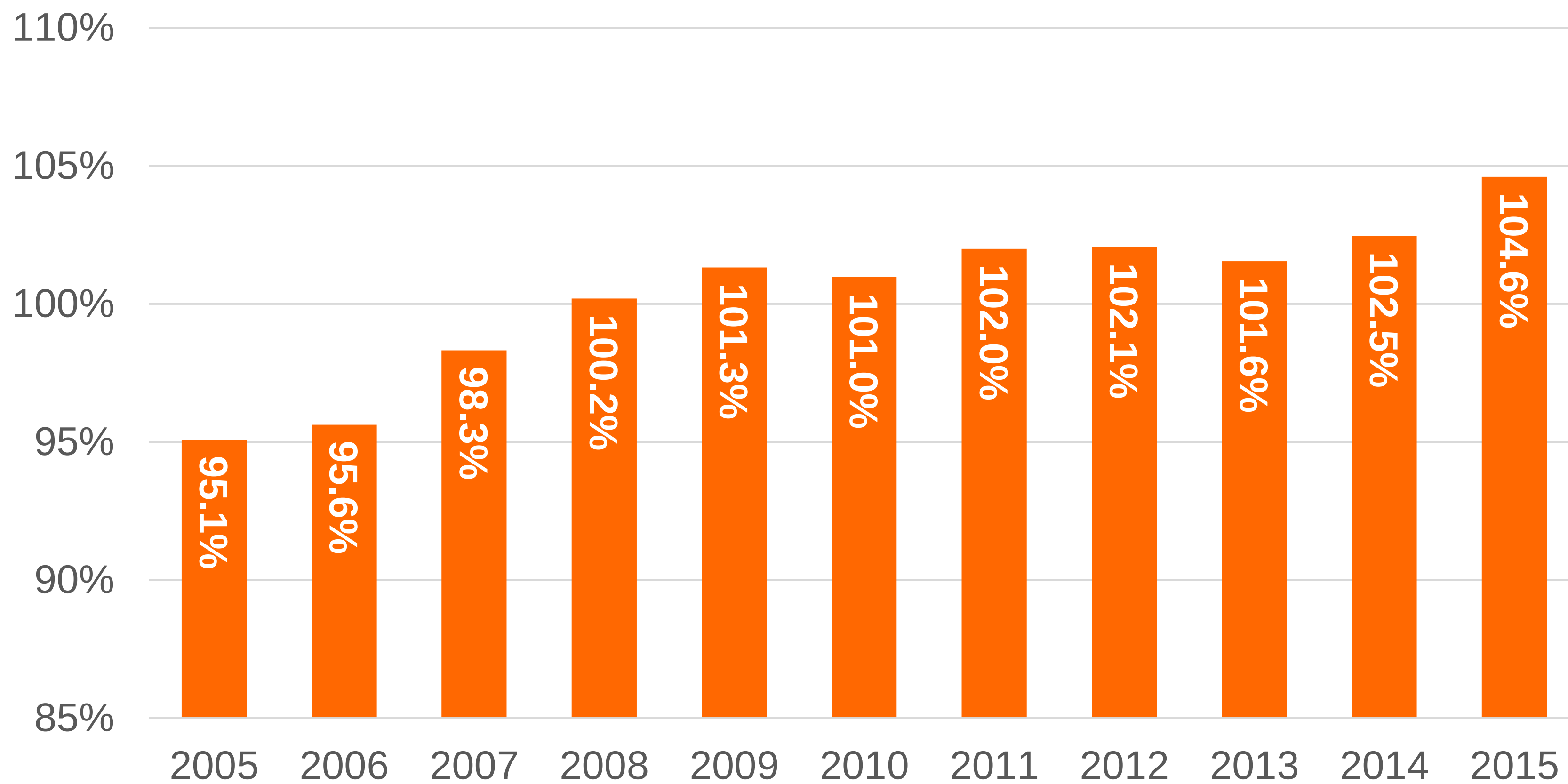
INSURANCE INFORMATION INSTITUTE



Auto Insurance Profitability Has Been Falling for A Decade.

SOURCE: National Association of Insurance Commissioners.

Net Combined Ratio, 2005-2015



Loss Ratios Have Been Rising for A Decade. 2015 Return on Net Worth Is Likely Close to Zero or Negative.

SOURCE: National Association of Insurance Commissioners data, sourced from S&P Global Market Intelligence; Insurance Information Institute.

INSURANCE INFORMATION INSTITUTE

Claim Trends in Private Passenger Auto Insurance

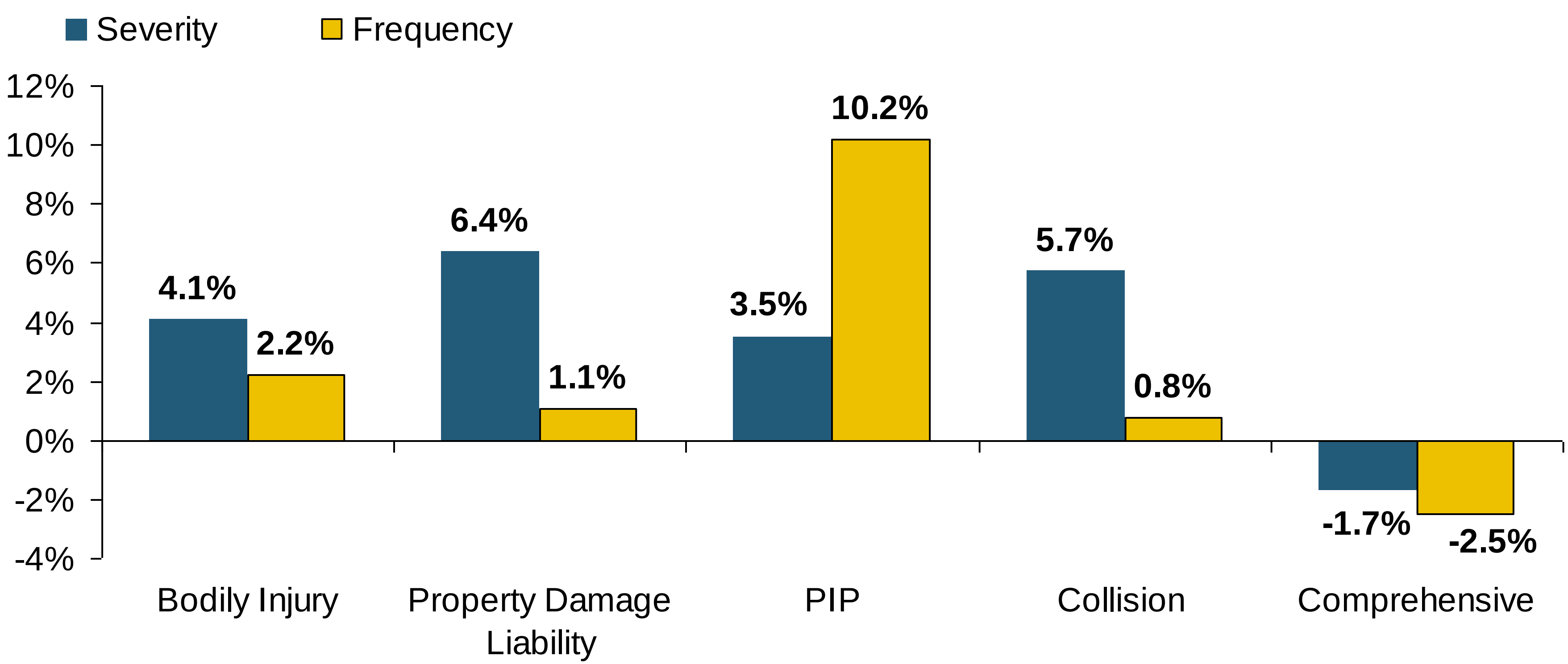
Rising Frequencies and Severities in Many Coverages

Will that Pattern Be Sustained?

Auto Severity & Frequency by Coverage: Trending Up in 2015

INSURANCE INFORMATION INSTITUTE

Annual Change, 2015 Over 2014



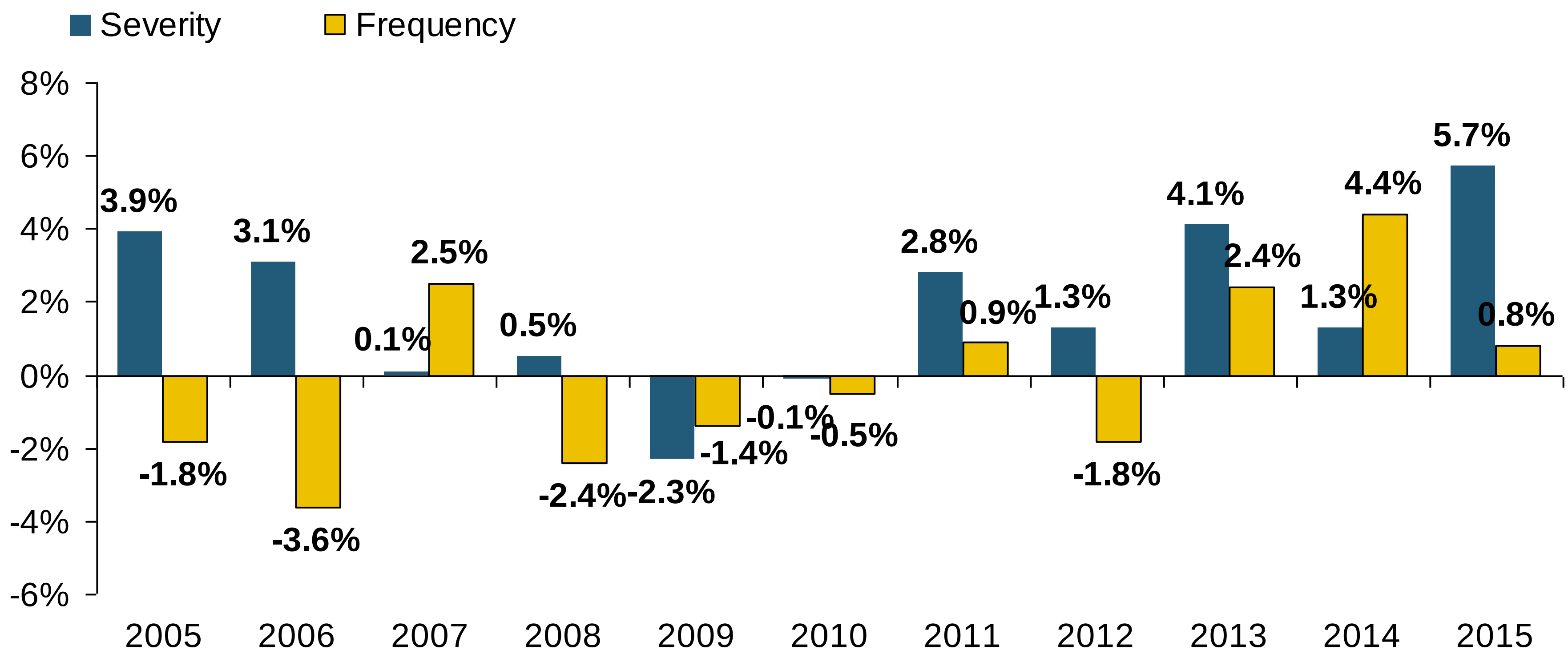
Frequency and Severity Were Up Across Most Coverage Types in 2015; A Trend Likely to Continue in 2016

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

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

INSURANCE INFORMATION INSTITUTE

Annual Change, 2005 through 2015

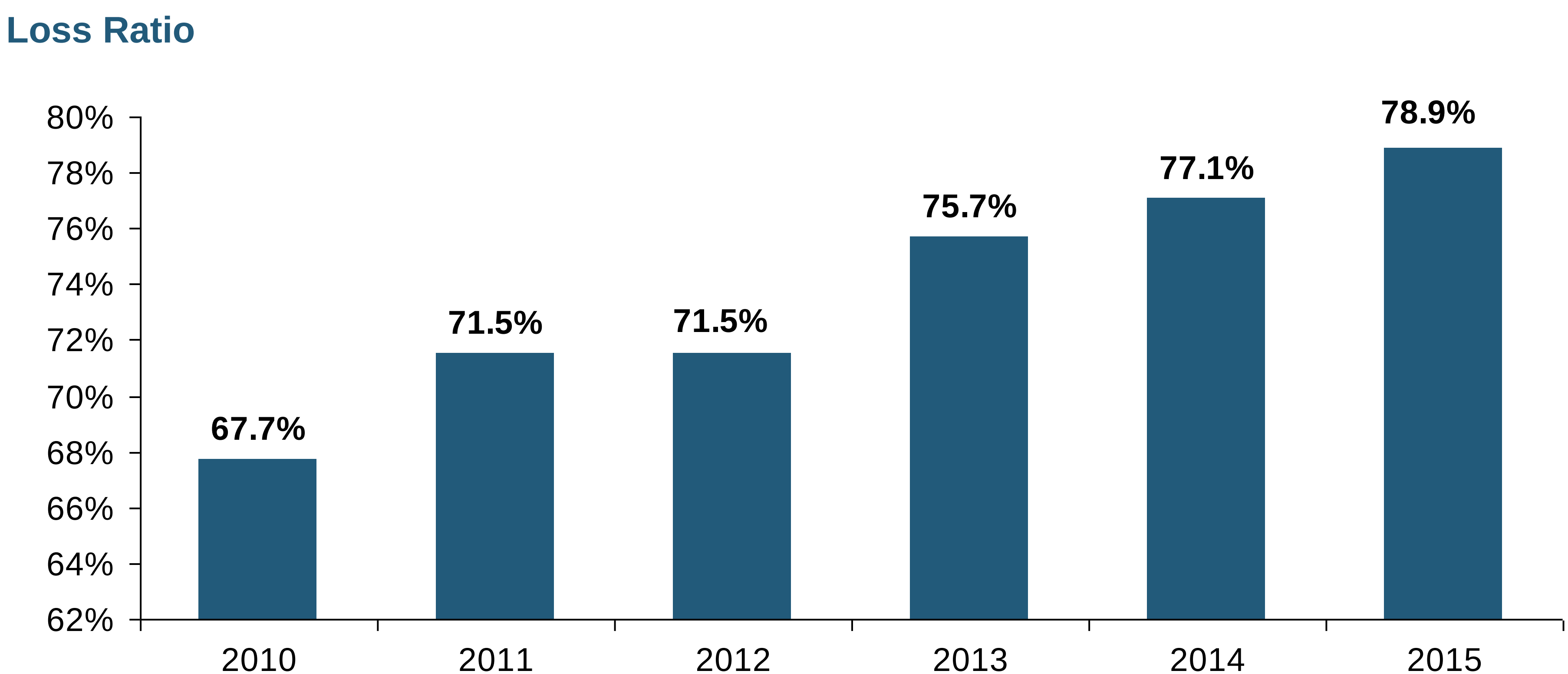


The Recession, High Fuel Prices Helped Temper Frequency and Severity, But this Trend Has Clearly Reversed, Consistent with Experience from Past Recoveries

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

Collision Loss Ratio Trending Upward: Private Passenger Auto, 2010 – 2015

INSURANCE INFORMATION INSTITUTE



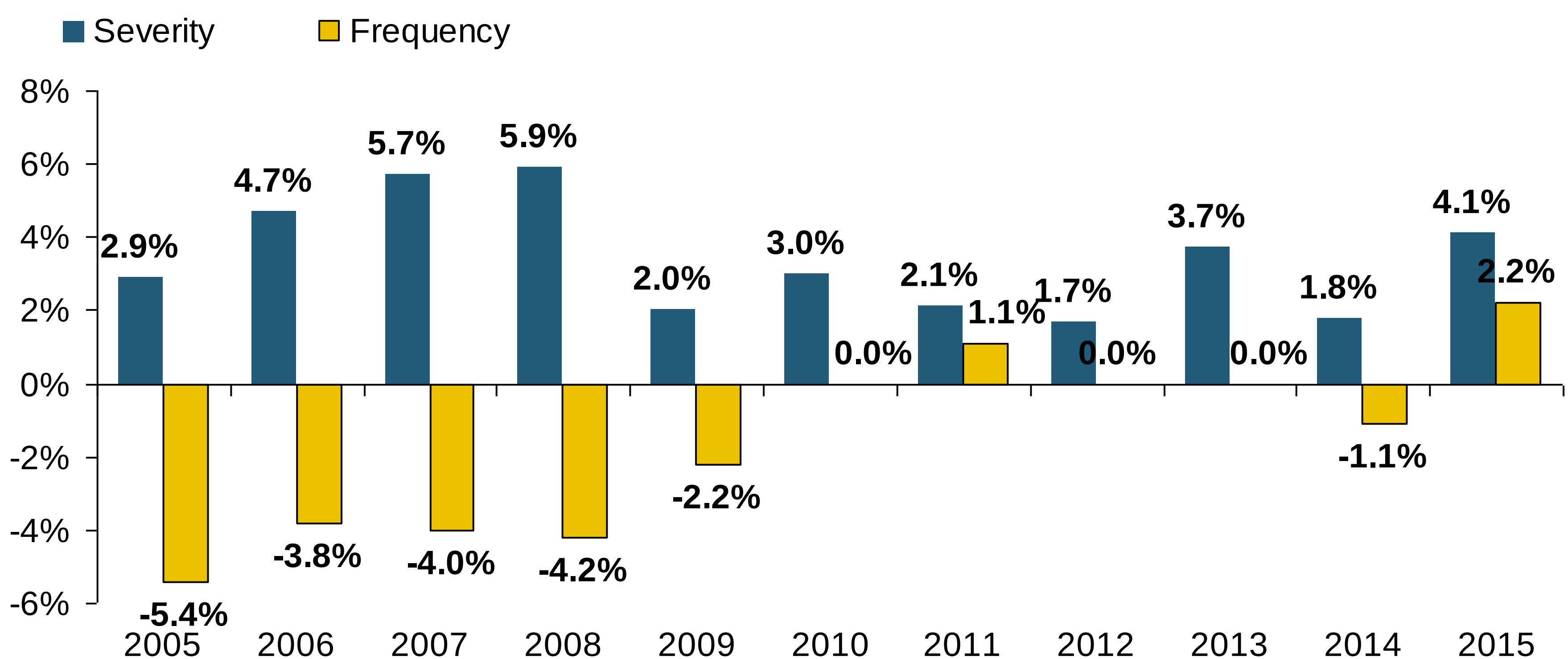
Collision Loss Ratios are Trending Steadily Upward

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

Bodily Injury: Severity Trend Is Up, Frequency Decline Has Ended—Rising?

INSURANCE INFORMATION INSTITUTE

Annual Change, 2005 through 2015



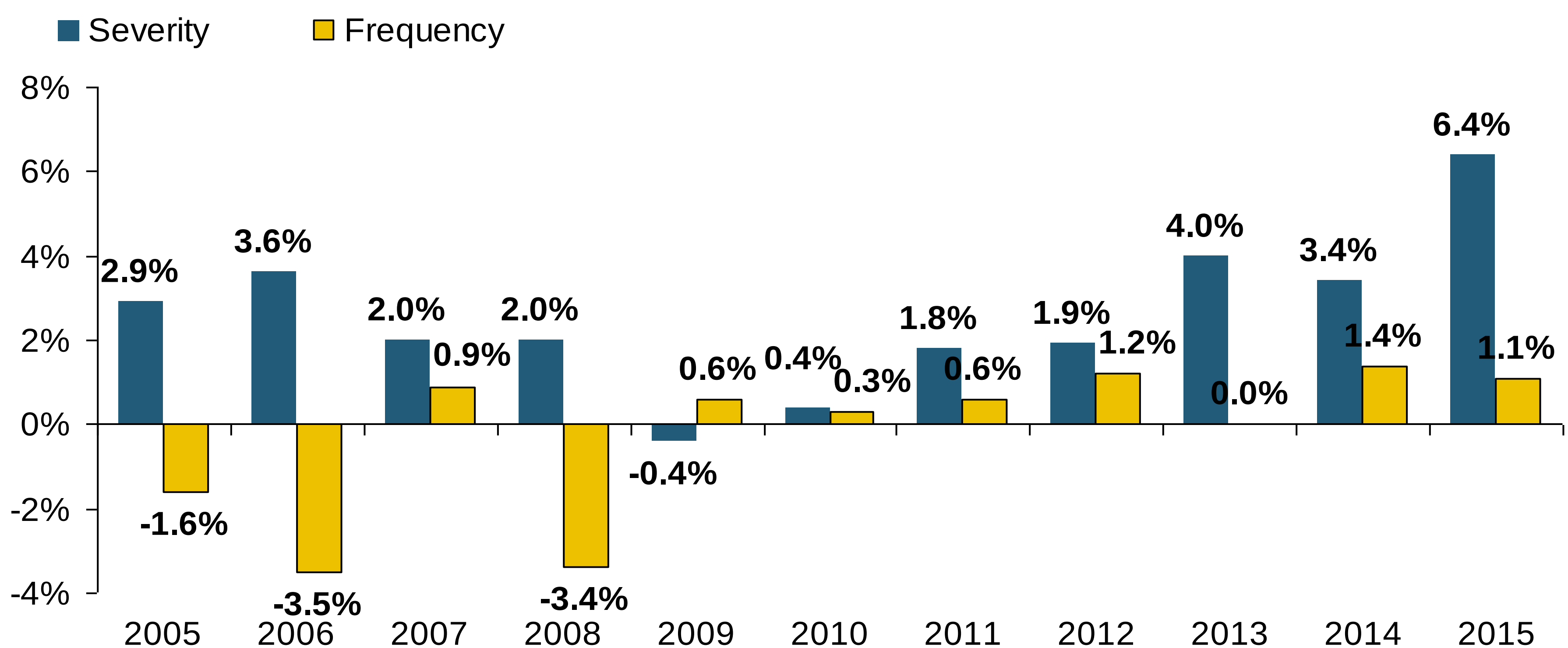
Cost Pressures Will Increase if BI Frequency and Severity Trends Persist

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

Property Damage Liability: Severity and Frequency Are Up

INSURANCE INFORMATION INSTITUTE

Annual Change, 2005 through 2015



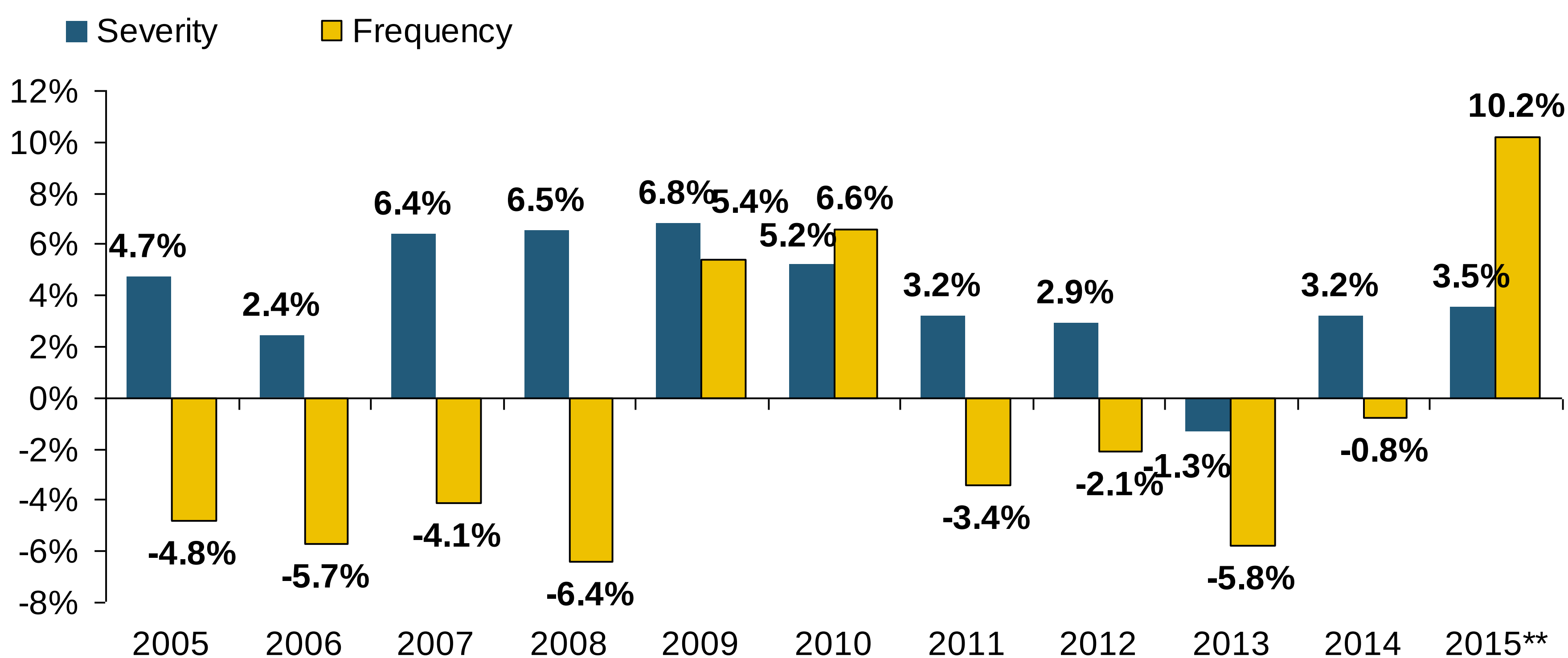
Severity/Frequency Trends Have Been Volatile, But Rising Severity since 2011 Is a Concern

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

No-Fault (PIP) Liability: Severity is Up, Frequency Relatively Flat*

INSURANCE INFORMATION INSTITUTE

Annual Change, 2005 through 2015



No-Fault Systems Are Less Problematic in Some States but Still of Concern in Some, Such as MI

*No-fault states included are: FL, HI, KS, KY, MA, MI, MN, NY, ND and UT.

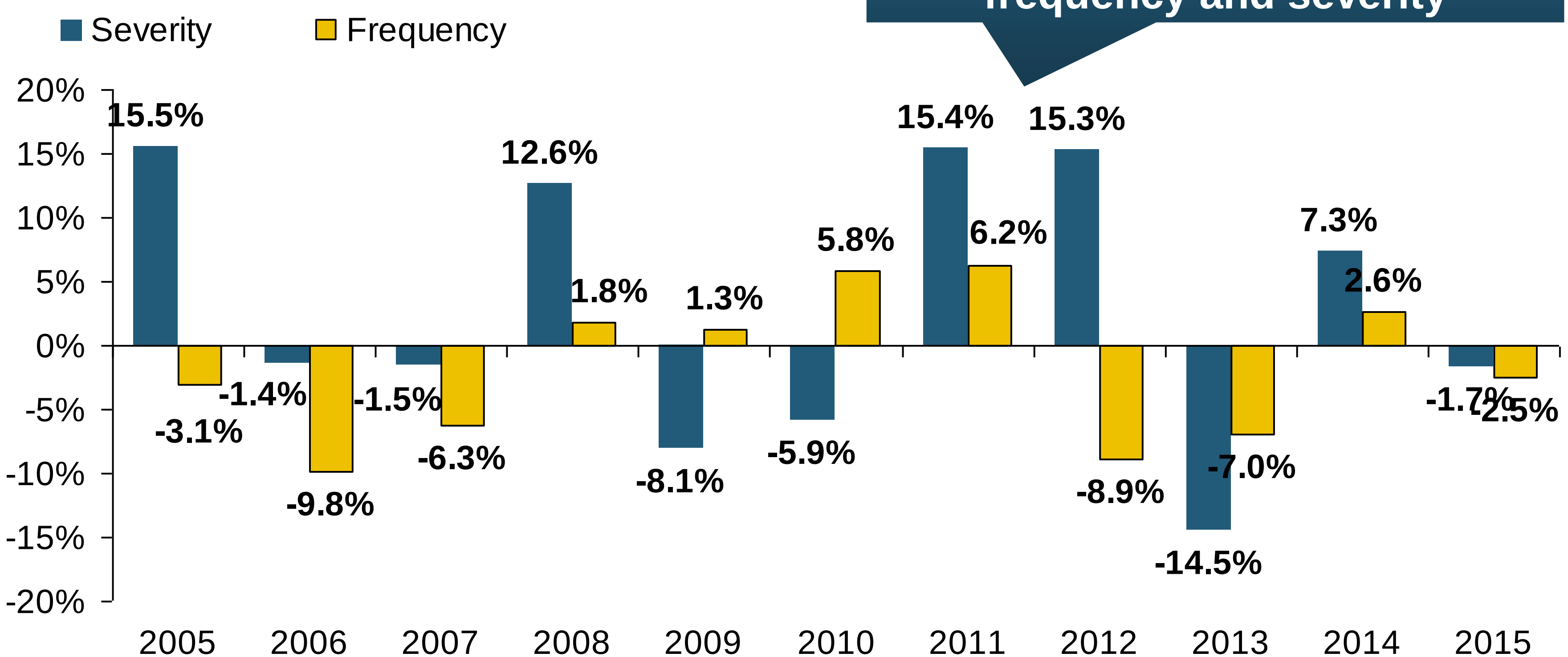
Source: ISO/PCI *Fast Track* data; Insurance Information Institute

Comprehensive Coverage: Frequency and Severity Trends Are Volatile

INSURANCE INFORMATION INSTITUTE

Annual Change, 2005 through 2015

Severe weather is a principal cause of the spikes in both frequency and severity

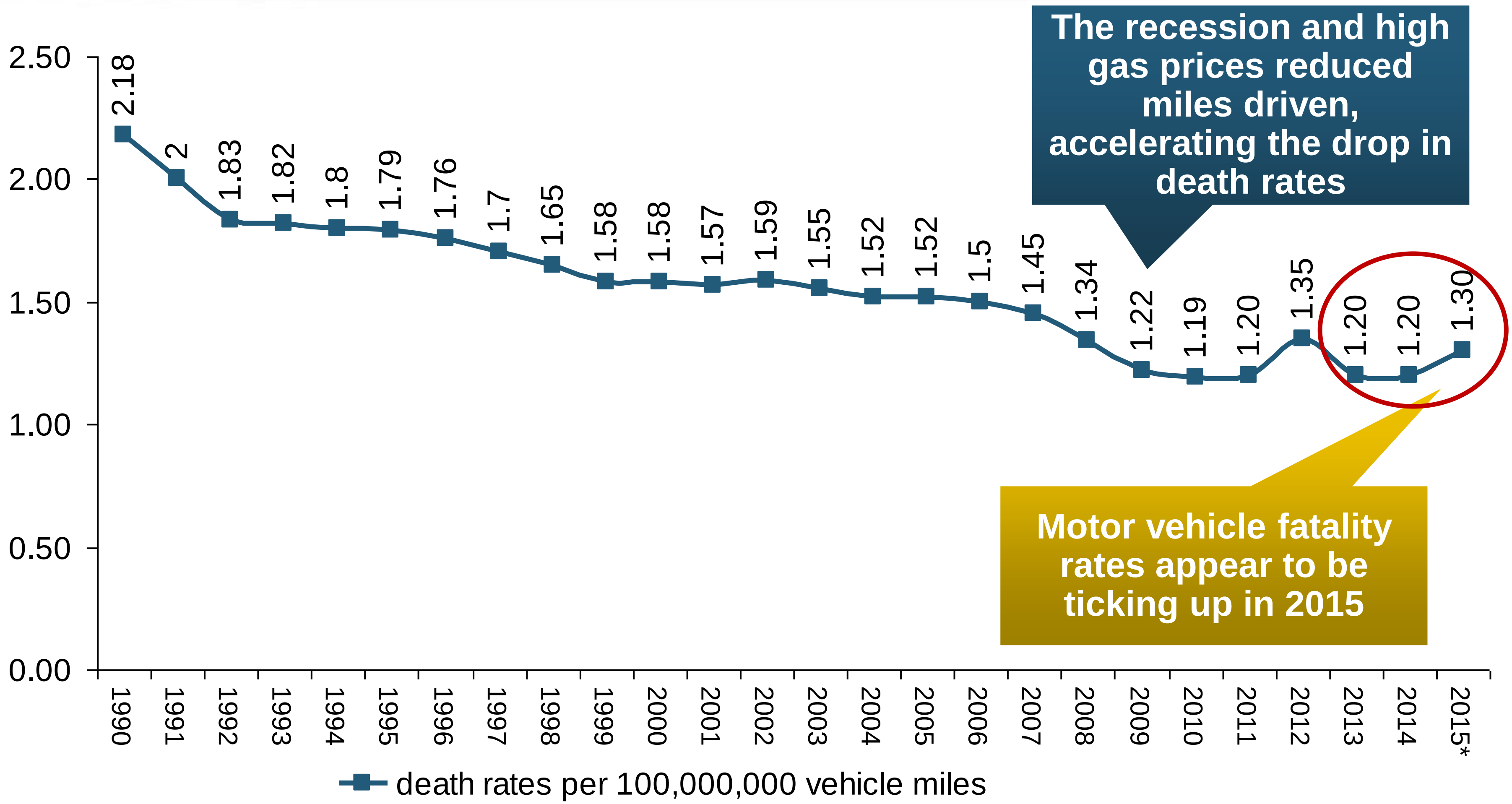


Weather Creates Volatility for Comprehensive Coverage

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

Death Rates per 100,000,000 Vehicle miles, 1990-2015*

INSURANCE INFORMATION INSTITUTE



Vehicle death rates fell by nearly half between 1990 and 2010

*Projected rate for 2015 based on date through June 2015.
Source: National Safety Council; Insurance Information Institute.

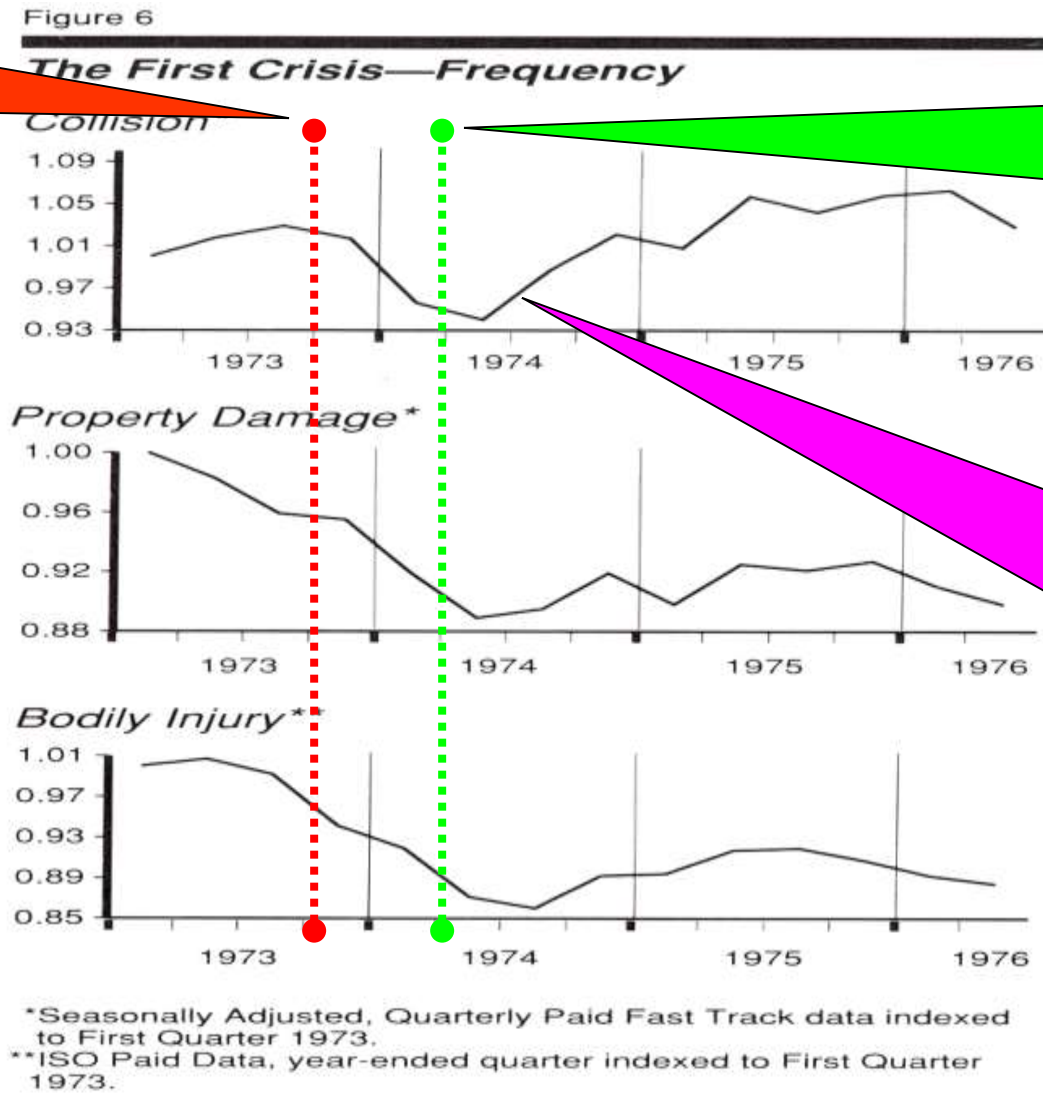
Auto Insurance: Claim Frequency Impacts of Energy Crisis of 1973/4

INSURANCE INFORMATION INSTITUTE

Oct. 17, 1973: Arab oil embargo begins

Frequency Impacts
Collision: -7.7%
PD: -9.5%
BI: -13.3%

Driving Stats
- Gas prices rose 35-40%
- Miles driven fell 6.7% in 1974



March 17, 1974: Arab oil states announce end to embargo

Frequency began to rebound almost immediately after the embargo ended

Source: ISO, US DOT.

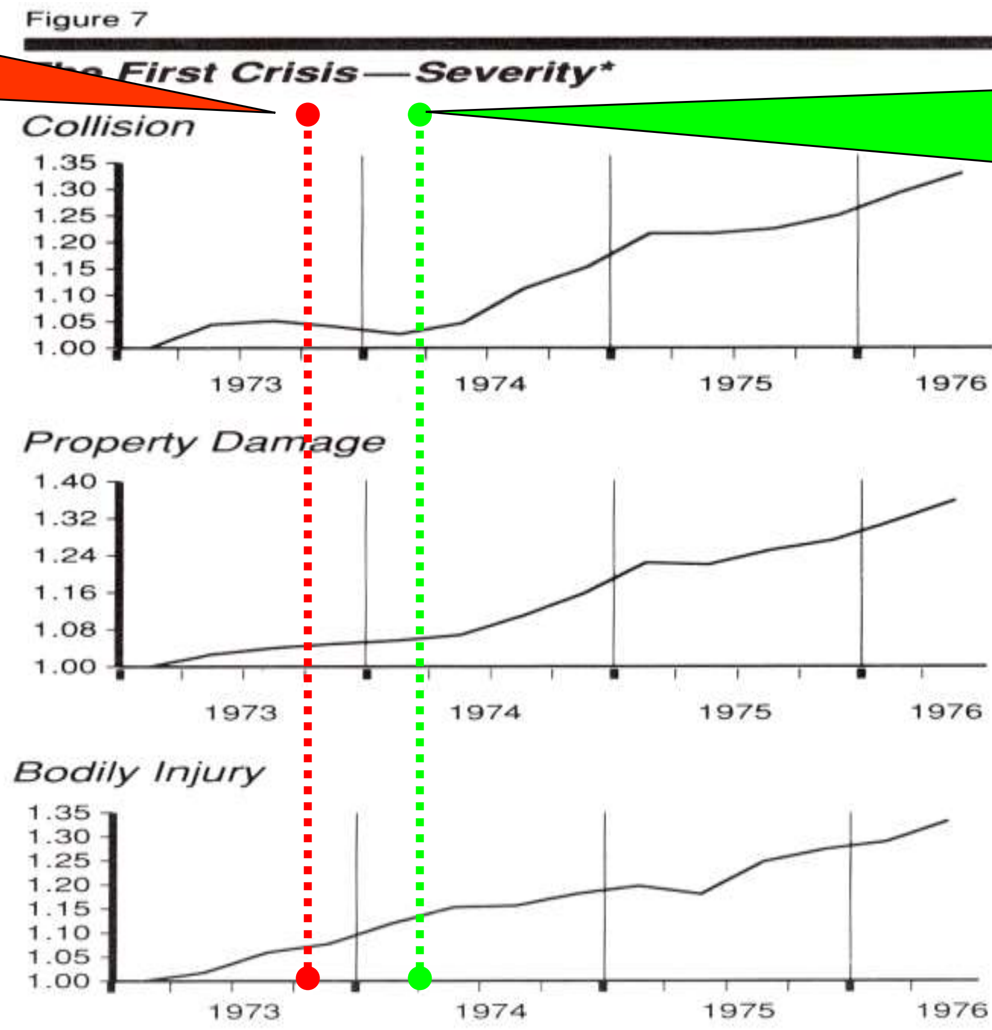
Auto Insurance: Claim Severity Impacts of Energy Crisis of 1973/4

INSURANCE INFORMATION INSTITUTE

Oct. 17, 1973: Arab oil embargo begins

Severity Impacts
Collision: -7.5%
PD: +15.9%
BI: N/A*

Driving Stats
- **Gas prices rose 35-40%**
- **Miles driven fell 6.7% in 1974**



*Seasonally Adjusted, Quarterly Paid Fast Track data indexed to First Quarter 1973.

March 17, 1974: Arab oil states announce end to embargo

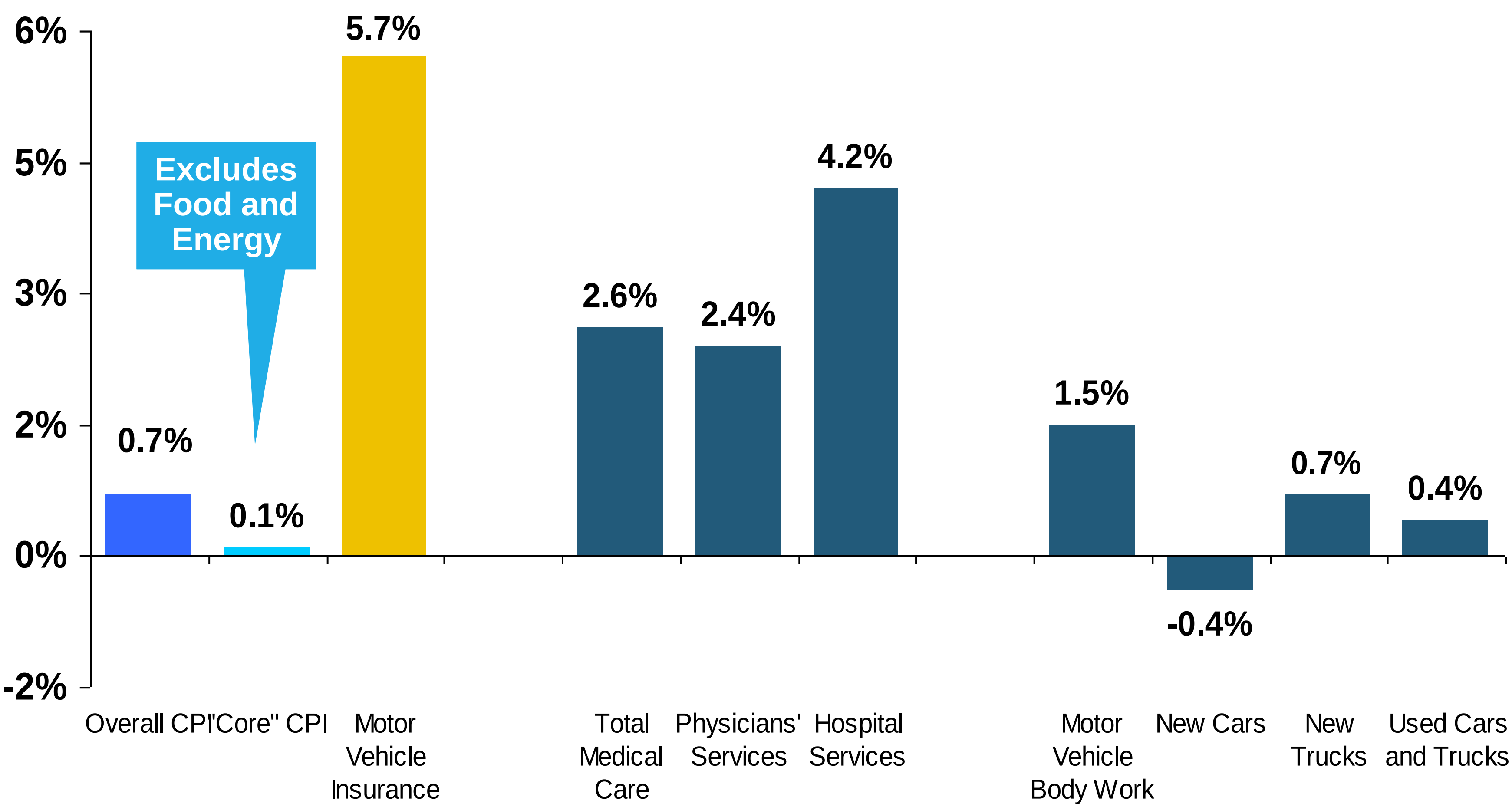
Collision severity began to rebound almost immediately after the embargo ended; PD accelerated as inflation rose; No discernable trend change

Source: ISO.

Auto Insurance Claim Cost Drivers Continue to Grow Faster than CPI

INSURANCE INFORMATION INSTITUTE

Price Level Change: December 2015 vs. December 2014



Healthcare costs are a major cost driver and are expected to accelerate in the years ahead

Sources: Bureau of Labor Statistics; Insurance Information Institute.

Defense Costs and Cost Containment Expenses as a Percent of Incurred Losses, 2011 – 2013*

INSURANCE INFORMATION INSTITUTE

($000)

	2011		2012		2013	
	Amount	As a percent of incurred losses	Amount	As a percent of incurred losses	Amount	As a percent of incurred losses
Products liability	$1,140,230	72.0%	$873,860	114.7%	$1,166,236	75.1%
Medical malpractice	1,793,296	57.5	1,686,009	45.7	1,656,049	53.3
Commercial multiple peril (2)	1,896,935	37.6	2,022,739	46.0	2,096,543	37.7
Other liability	4,464,140	25.0	4,959,838	24.8	4,914,106	25.4
Workers compensation	3,087,836	12.6	3,071,093	12.3	3,012,719	12.3
Commercial auto liability	960,961	10.3	1,091,434	10.4	1,207,596	10.7
Private passenger auto liability	3,960,967	6.2	4,353,427	6.7	4,600,395	6.8
All liability lines	**$17,304,365**	**13.8%**	**$18,058,400**	**13.9%**	**$18,653,644**	**14.0%**

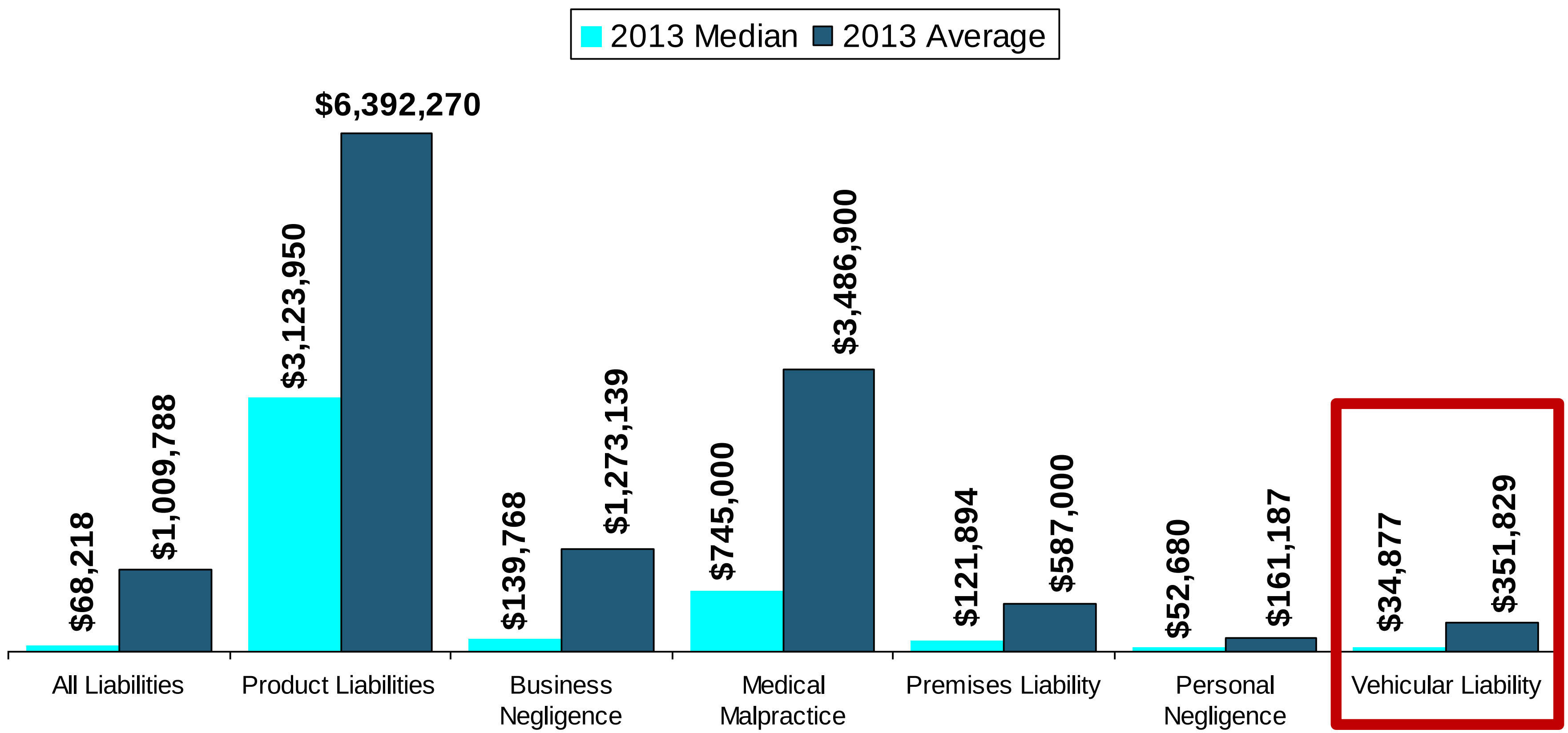
(1) Net of reinsurance, excludes state funds.
(2) Liability portion only.

Defense and Cost Containment expenses in Pvt. Passenger Auto Liability have edged up slightly in recent years, from 6.2% of incurred losses to 6.8%

*Latest available.
Source: SNL Financial; Insurance Information Institute.

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

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



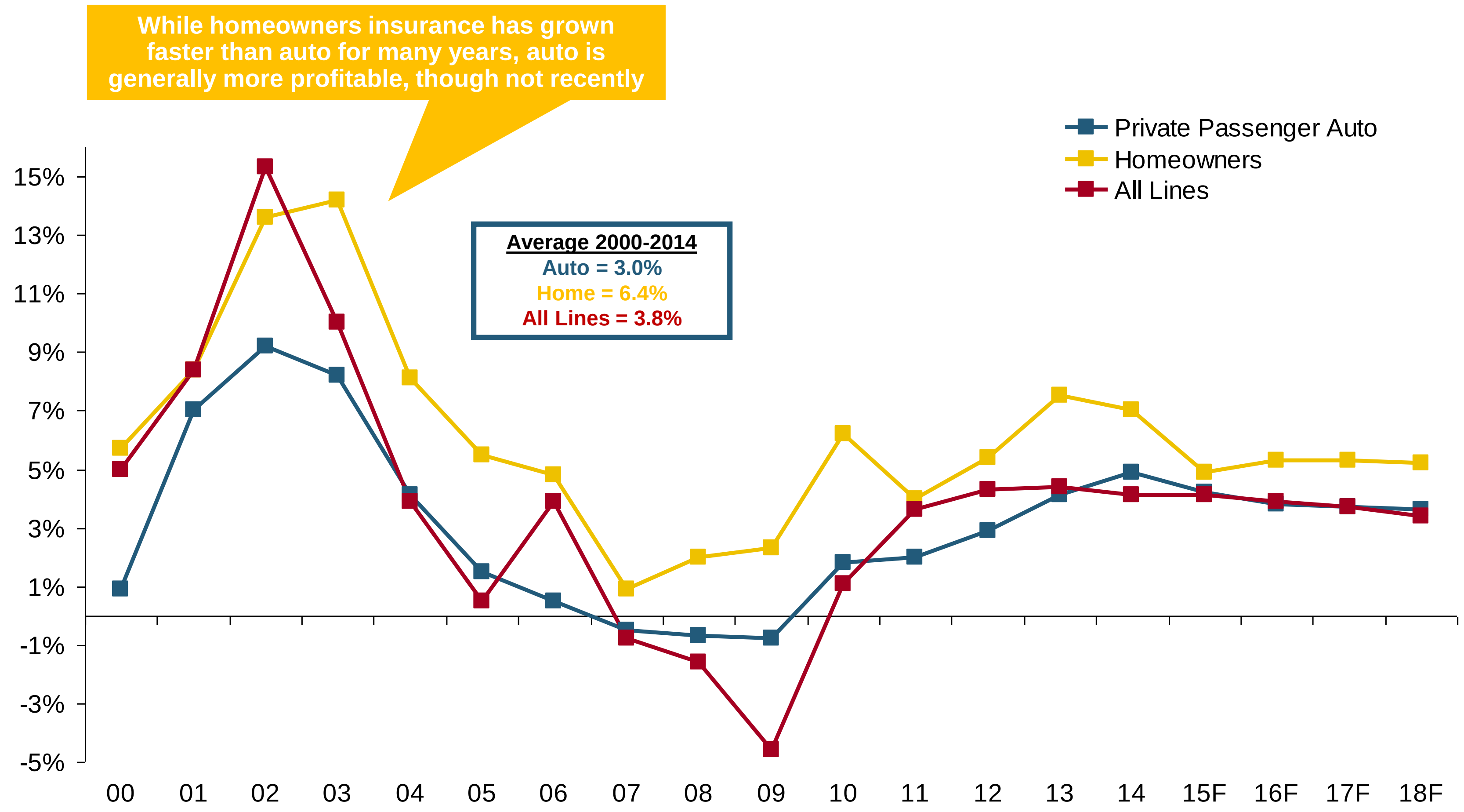
Source: *Current Award Trends in Personal Injury,* 54th Edition; Insurance Information Institute.

INSURANCE INFORMATION INSTITUTE

Personal Lines Growth Analysis

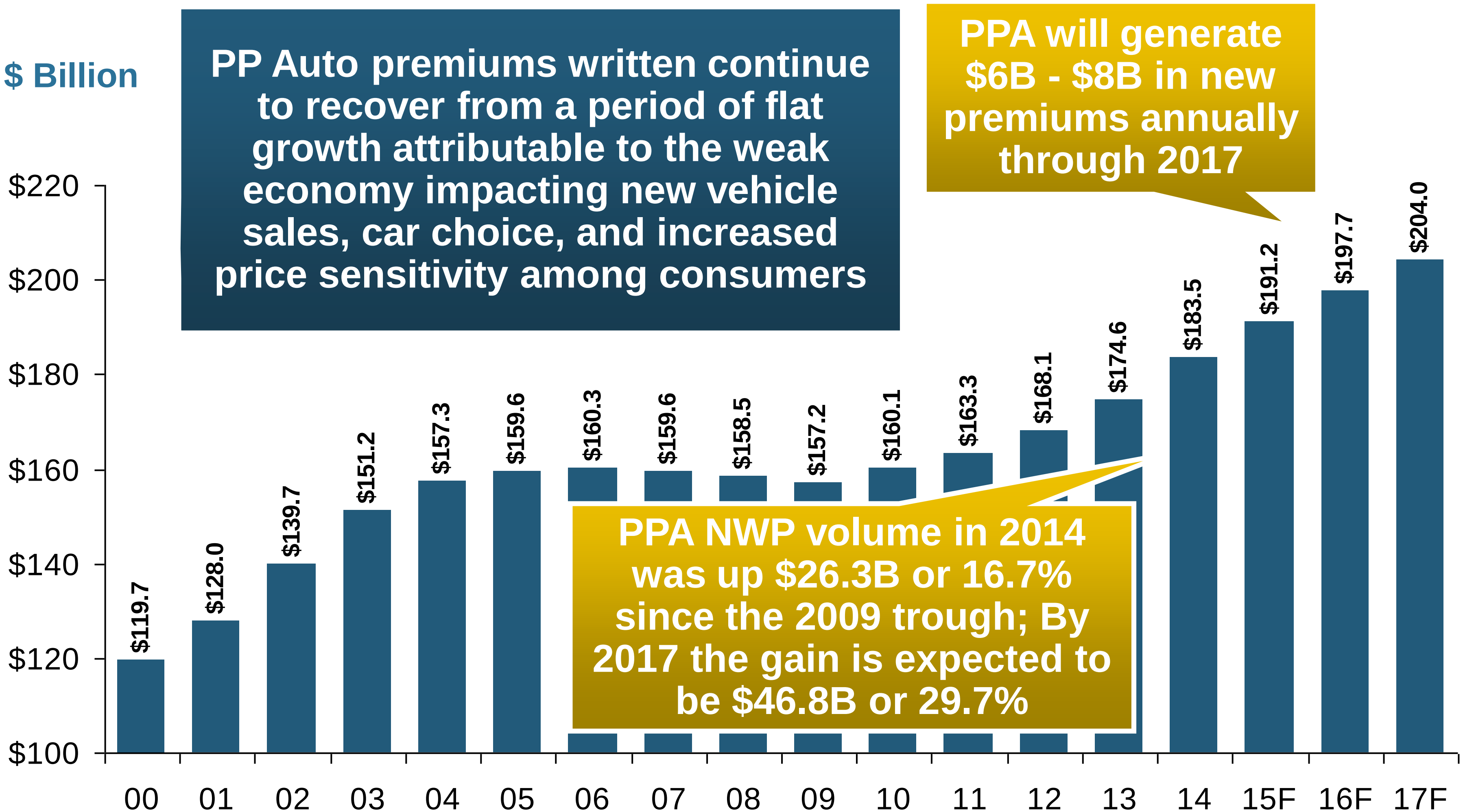
Growth Trajectories Differ Substantially by State and Over Time

Auto & Home vs. All Lines, Net Written Premium Growth, 2000–2018F



Sources: A.M. Best (2000-2014); Conning/Insurance Information Institute (2015F-2018F); Insurance Information Institute.

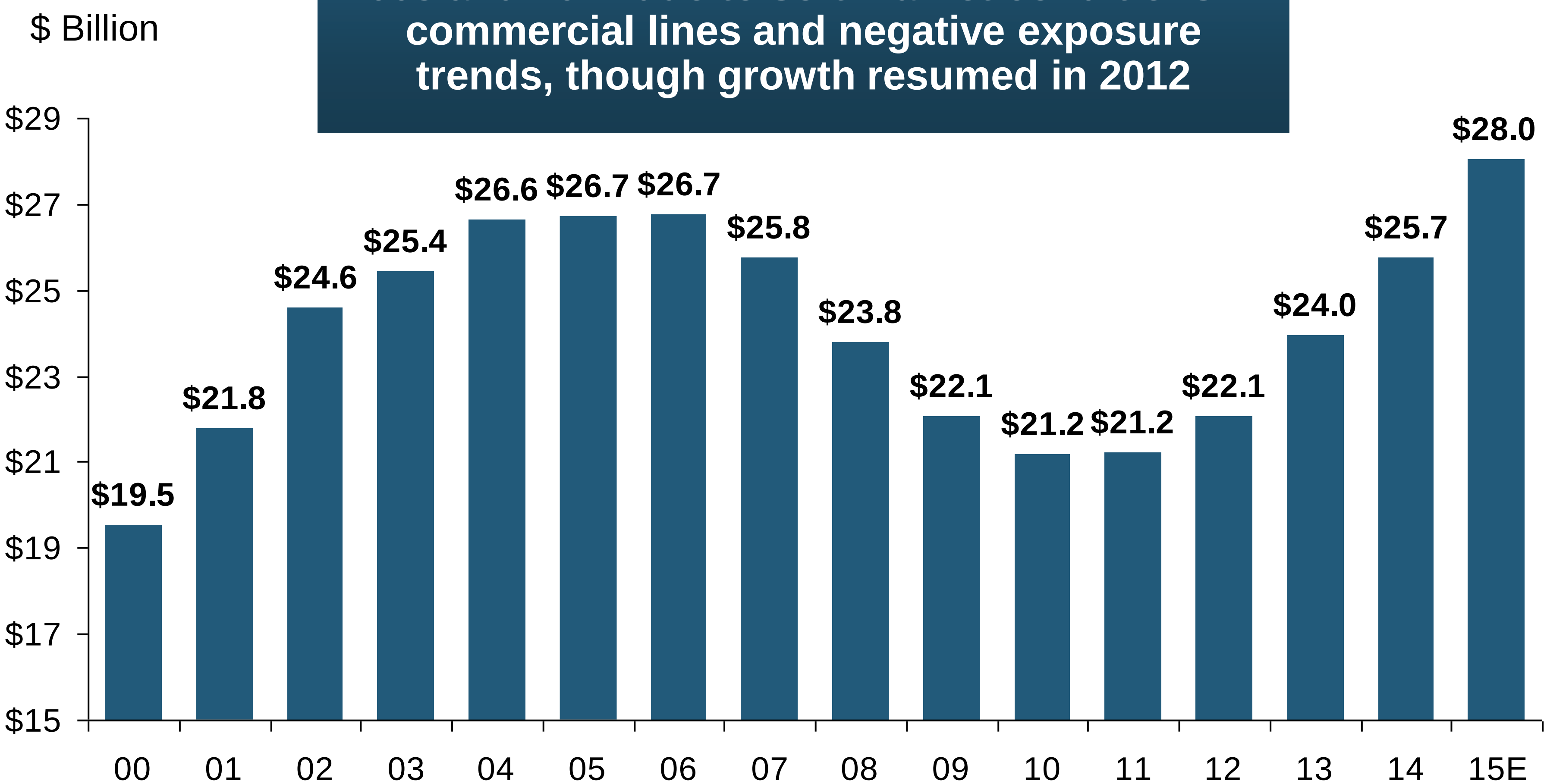
Private Passenger Auto Insurance Net Written Premium, 2000–2017F



Sources: A.M. Best (1990-2014); Conning (2015-17F); Insurance Information Institute.

Commercial Auto Insurance Net Written Premium, 2000–2015F

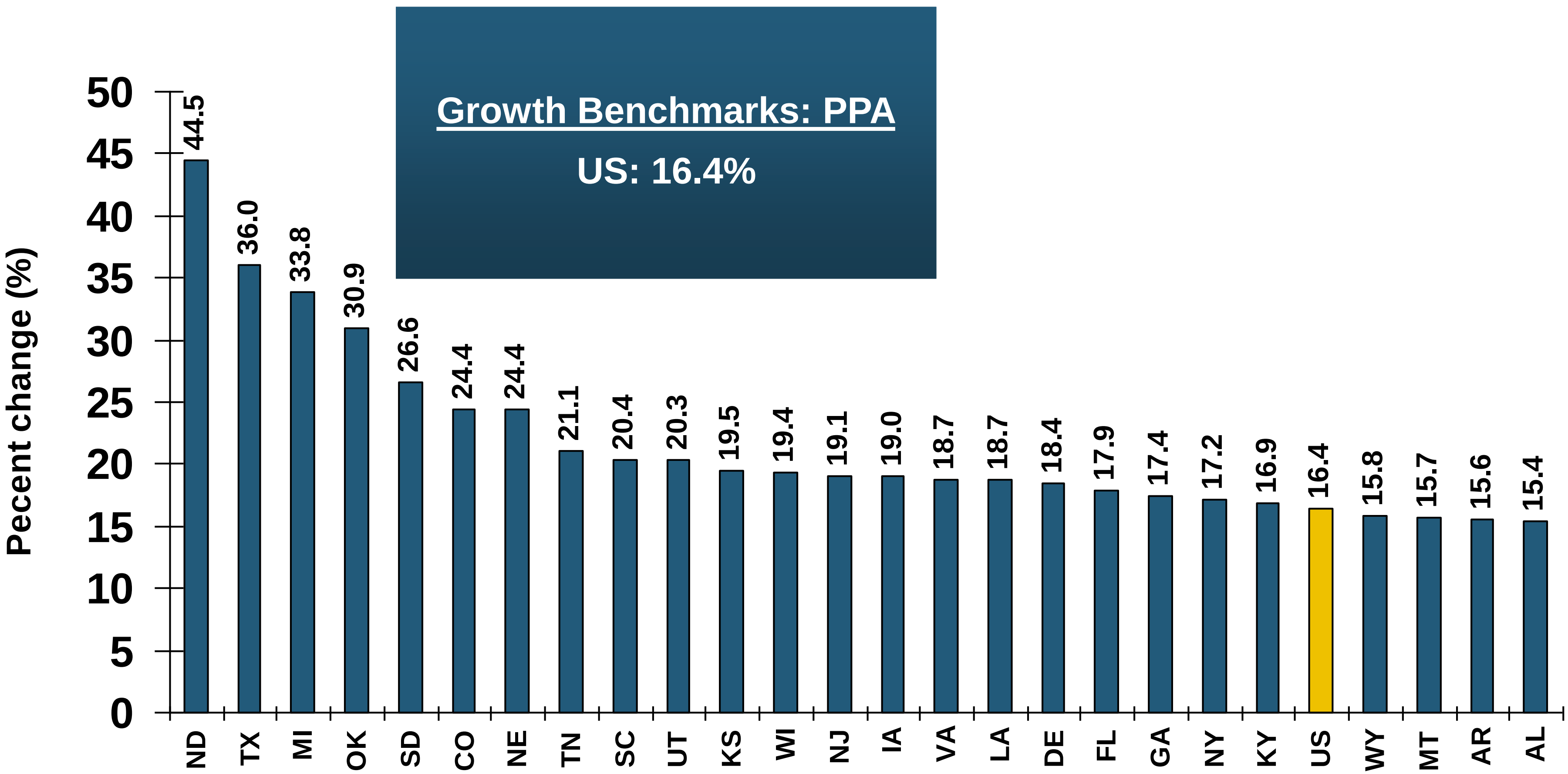
In contrast to positive PP Auto NPW growth, Commercial Auto premiums fell 21.3% between 2005 and 2011 due to soft market conditions in commercial lines and negative exposure trends, though growth resumed in 2012



Sources: A.M. Best (2000-2014); Conning (2015F); Insurance Information Institute.

Direct Premiums Written: PP Auto Percent Change by State, 2007-2014

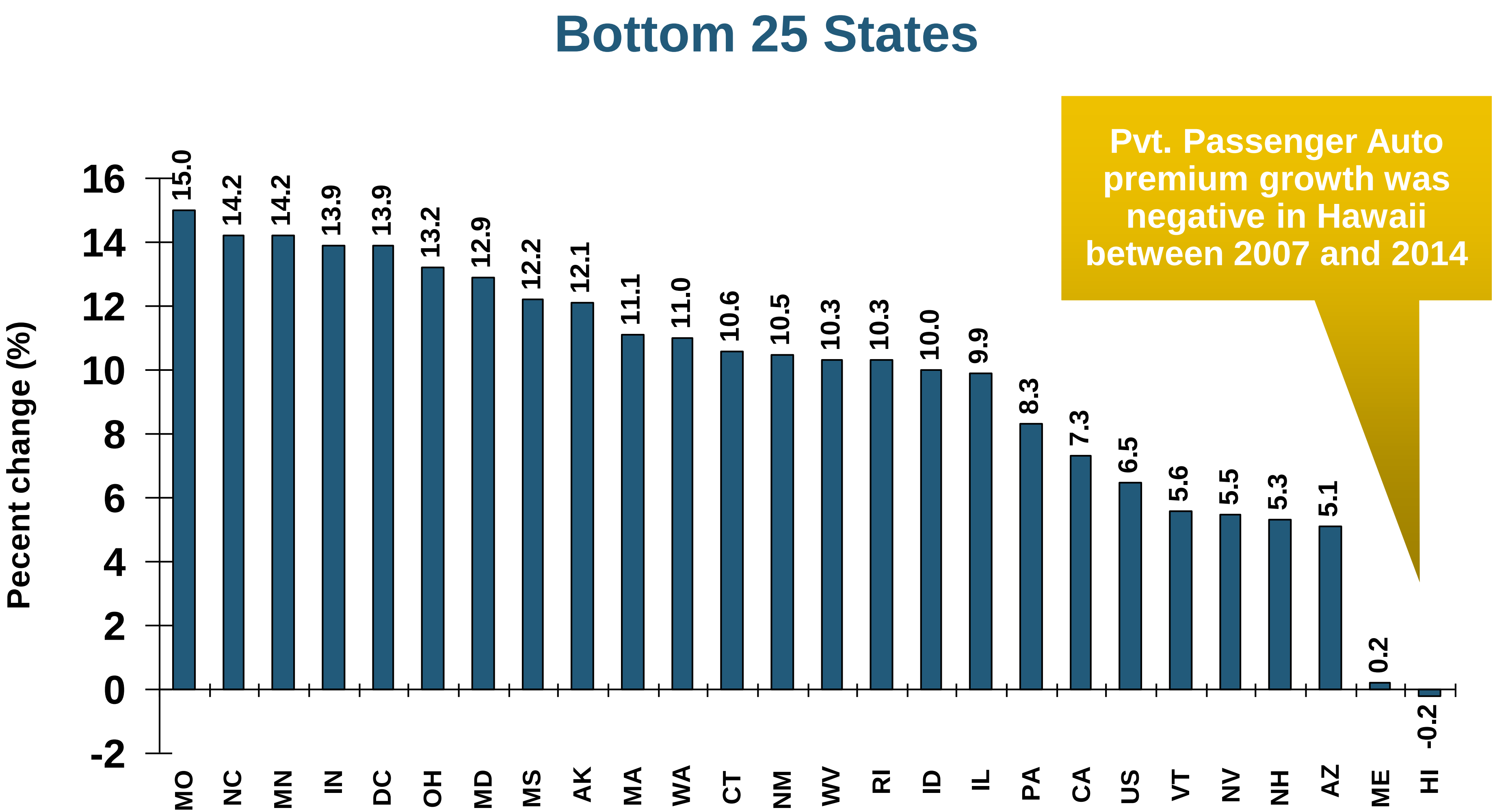
Top 25 States



Sources: SNL Financial LC.; Insurance Information Institute.

Direct Premiums Written: PP Auto Percent Change by State, 2007-2014

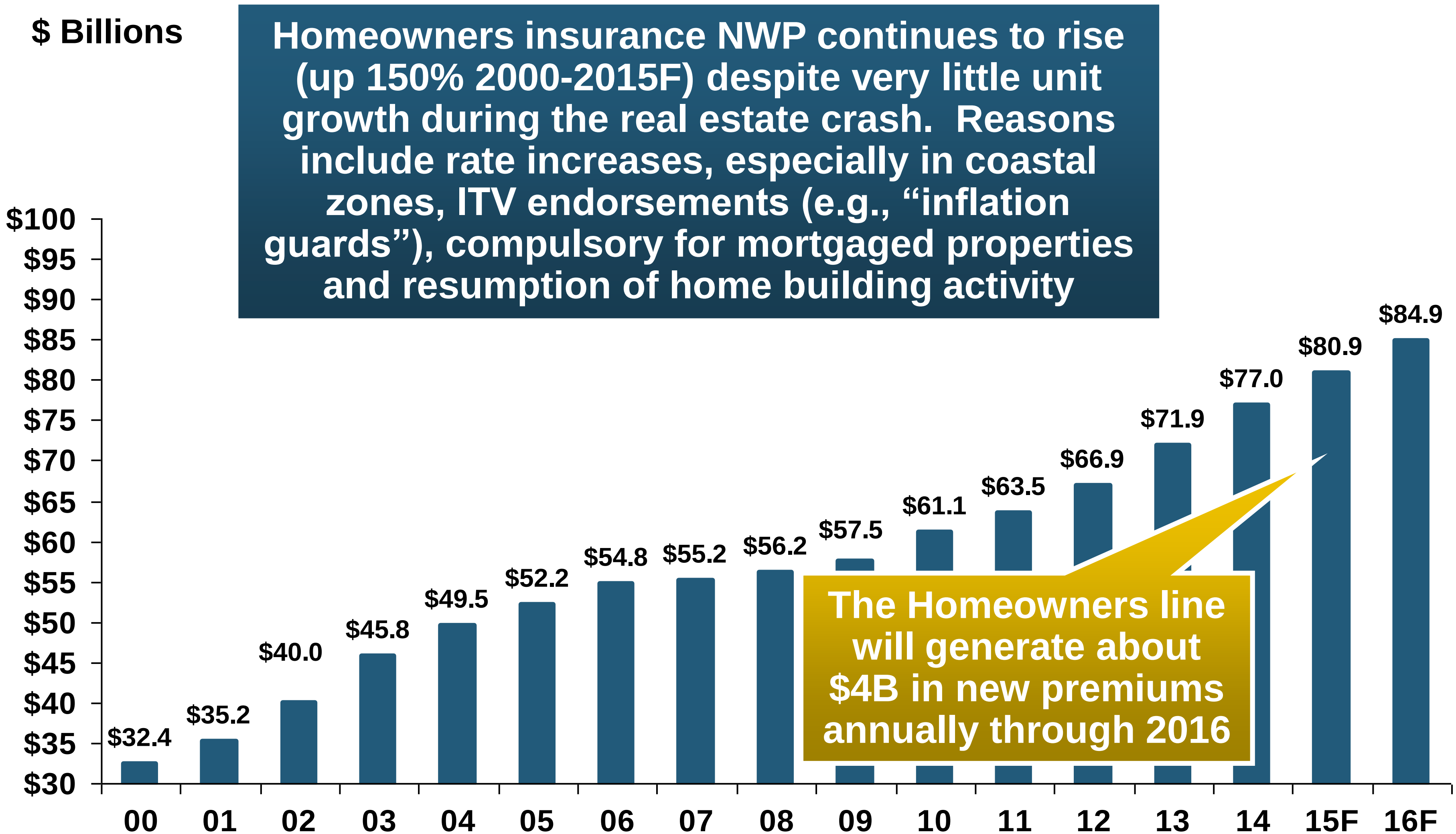
INSURANCE INFORMATION INSTITUTE



Sources: SNL Financial LC.; Insurance Information Institute.

Homeowners Insurance Net Written Premium, 2000–2016F

INSURANCE INFORMATION INSTITUTE



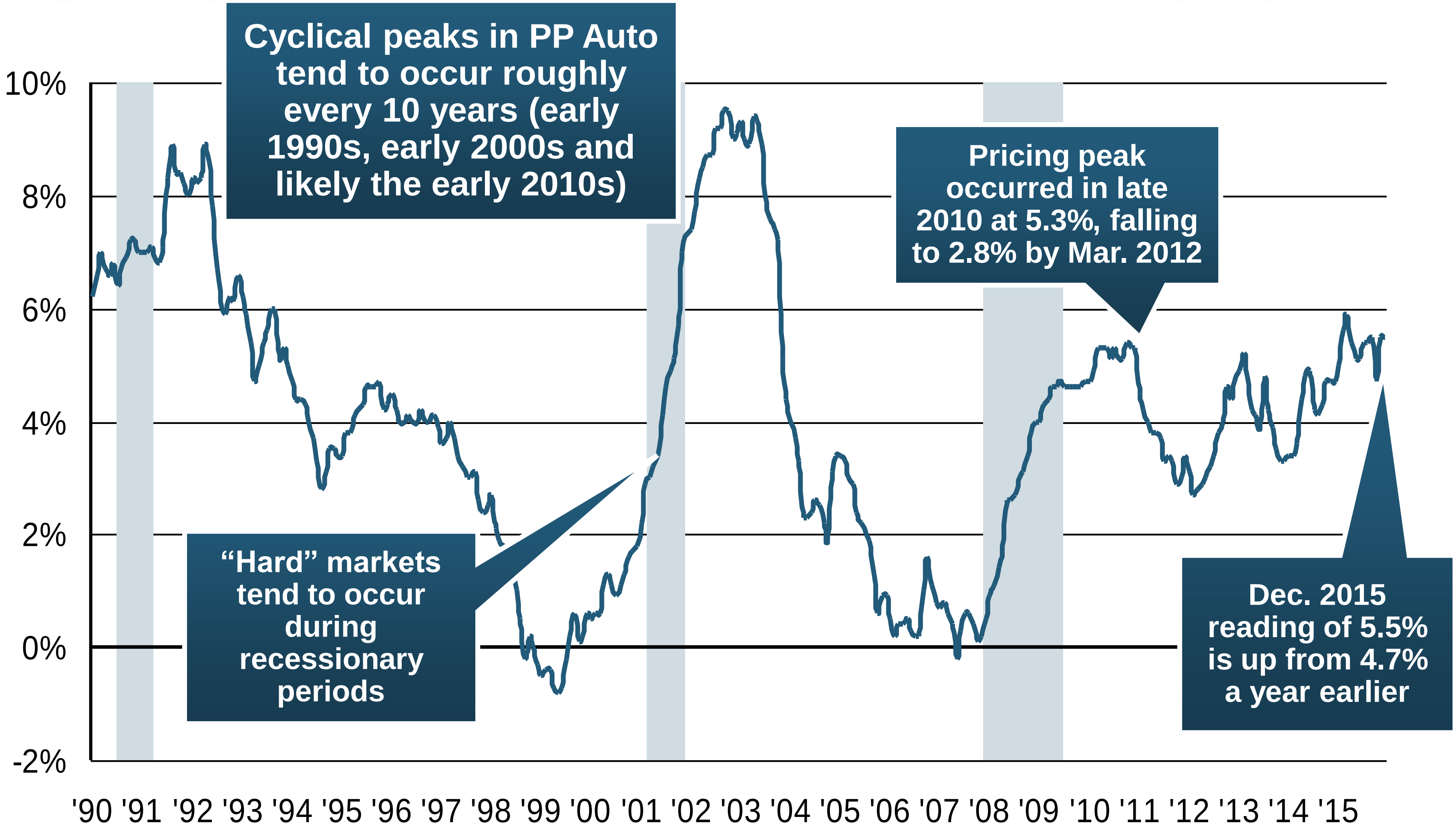
Sources: A.M. Best; Insurance Information Institute.

Personal Lines Growth Drivers

Rate and Exposure are Both Presently Important Growth Drivers

Monthly Change in Auto Insurance Prices, 1991–2015*

INSURANCE INFORMATION INSTITUTE

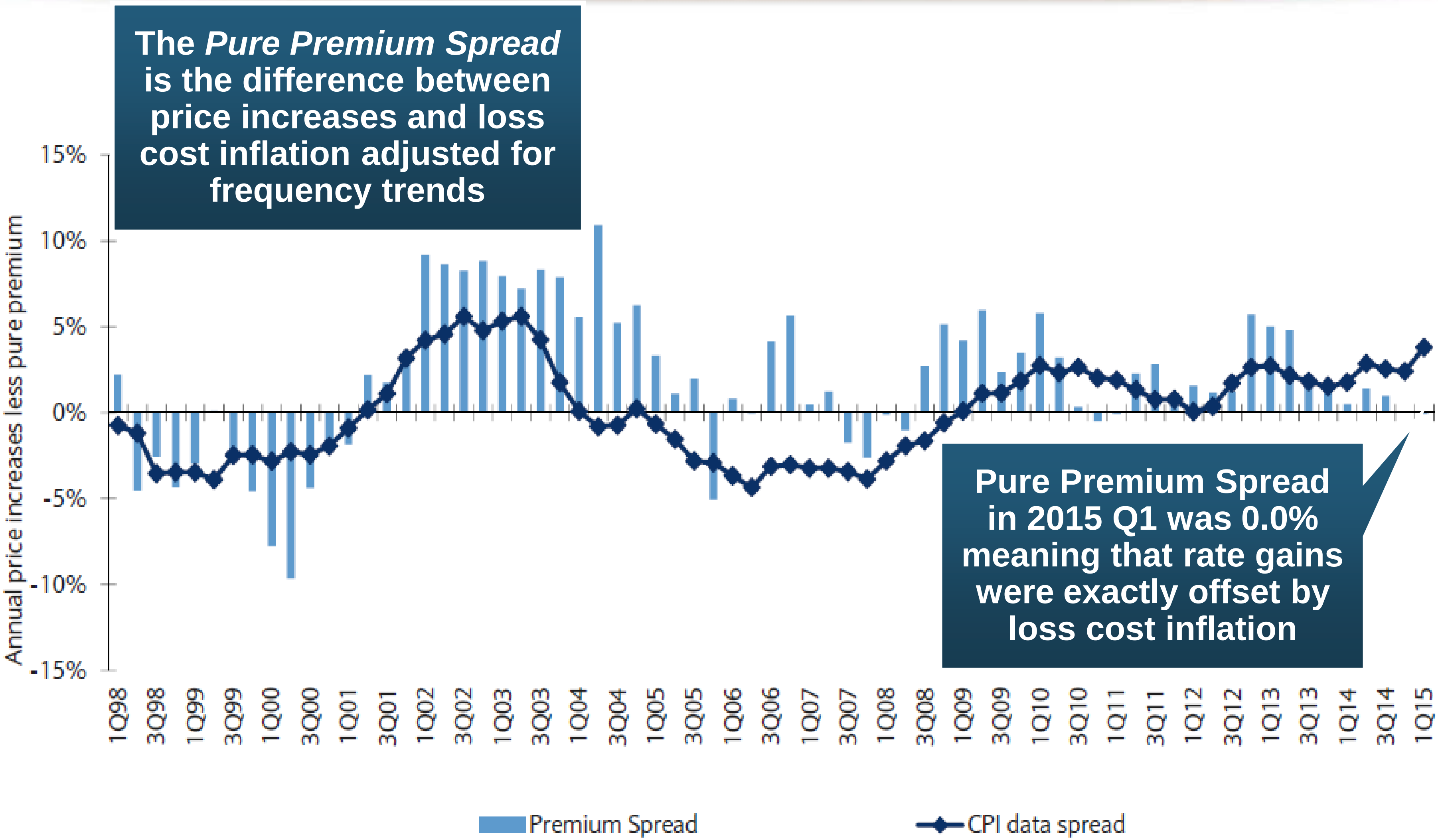


*Percentage change from same month in prior year; through Dec. 2015; seasonally adjusted

Note: Recessions indicated by gray shaded columns.

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

Private Passenger Auto: Premium Growth vs. Loss Cost Spread



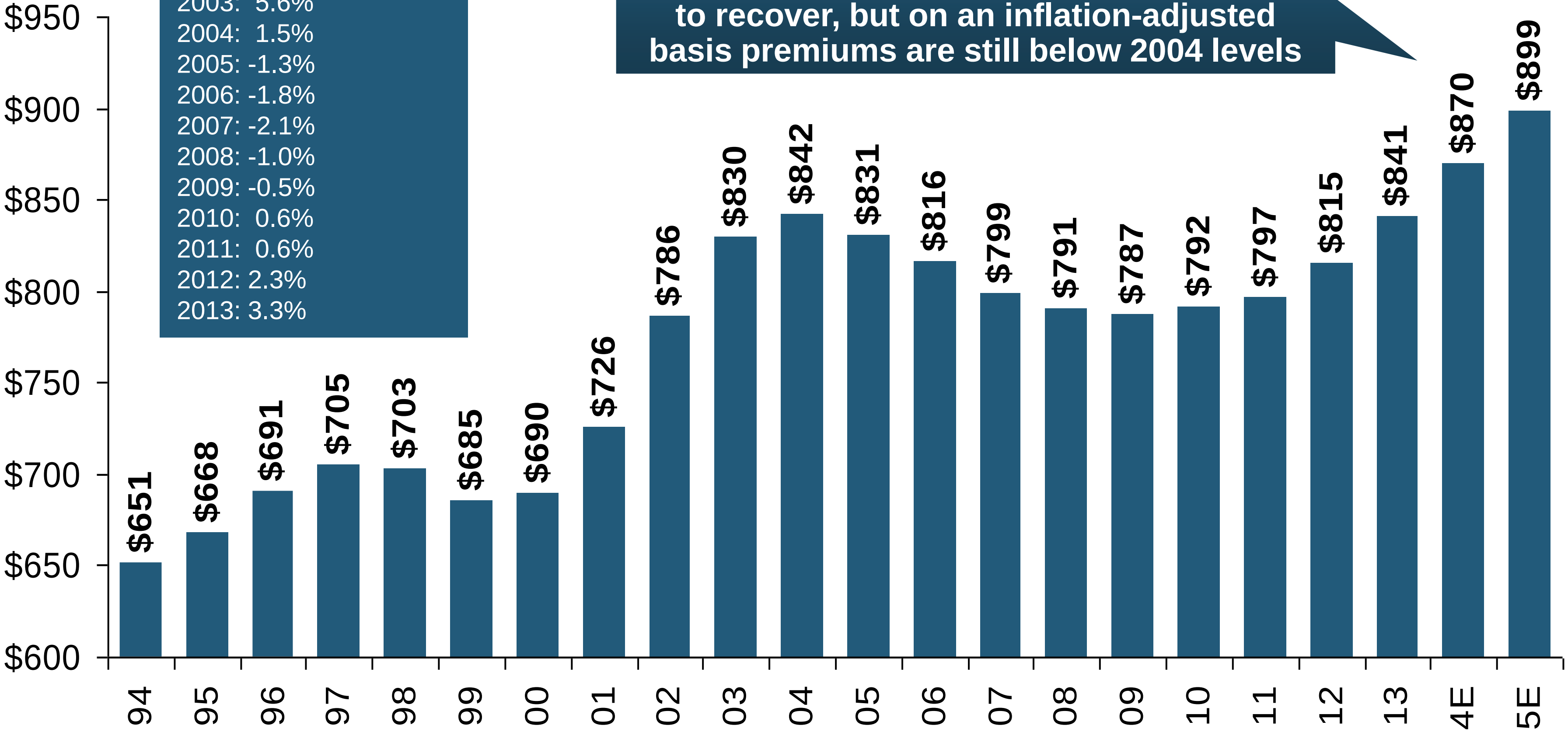
Sources: Barclays Capital, August 2015.

Average Expenditures* on Auto Insurance, 1994-2015E

INSURANCE INFORMATION INSTITUTE

Annual Pct Changes
2001: 5.2%
2002: 8.6%
2003: 5.6%
2004: 1.5%
2005: -1.3%
2006: -1.8%
2007: -2.1%
2008: -1.0%
2009: -0.5%
2010: 0.6%
2011: 0.6%
2012: 2.3%
2013: 3.3%

The average expenditure on auto insurance now finally exceeds the pre-crisis high of $842 recorded in 2004, taking a full decade to recover, but on an inflation-adjusted basis premiums are still below 2004 levels



Across the U.S., auto insurance expenditures fell by 0.8% in 2008 and 0.5% in 2009 but rose 0.5% in 2010, 0.8% in 2011, 2.3% in 2012 and 3.3% in 2013; I.I.I. estimate is for +3.4% in 2014 and 2015.

* The NAIC data are per-vehicle (actually, per insured car-year)
Sources: NAIC for 1994-2013; Insurance Information Institute estimates for 2014-2015 based on CPI and other data.

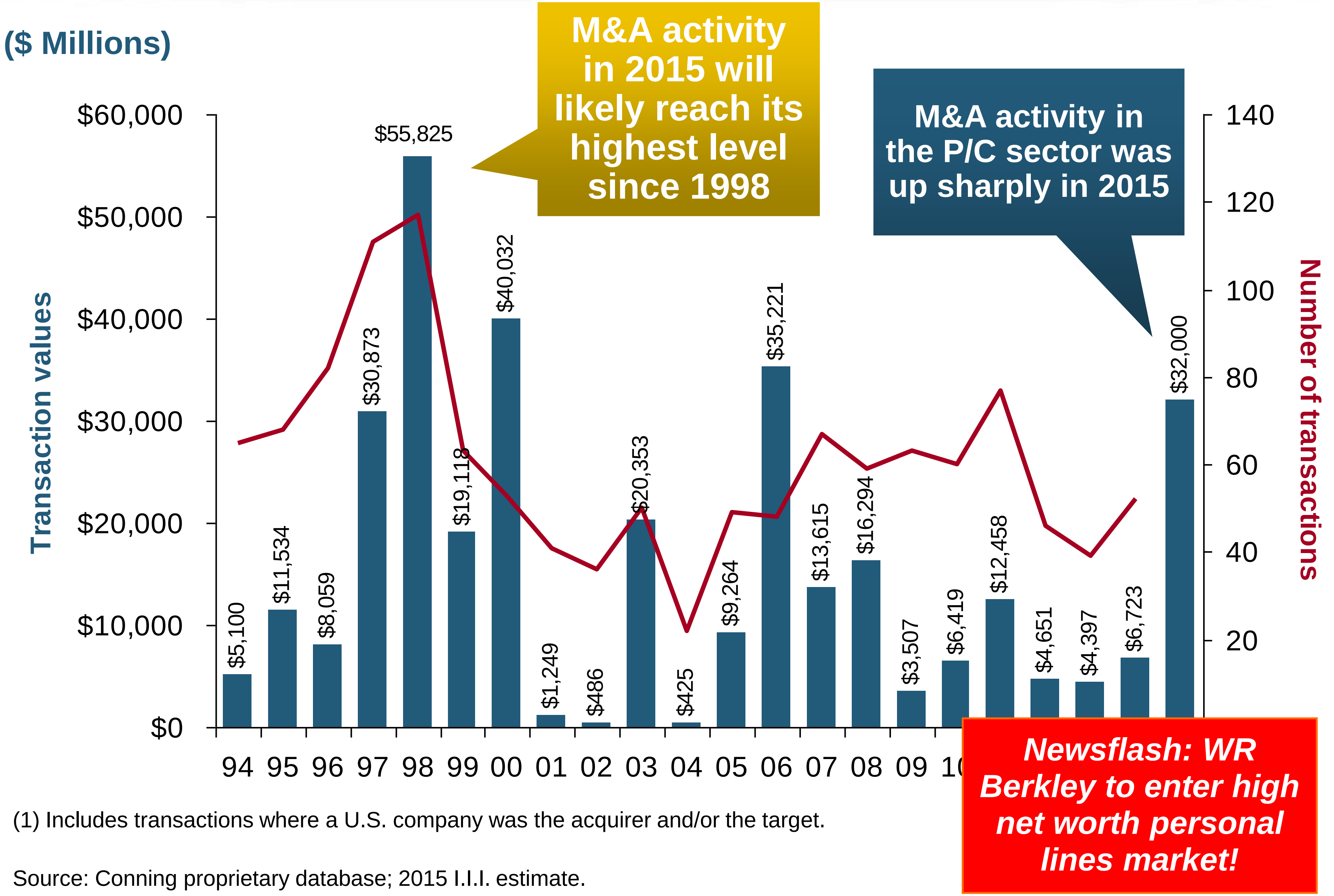
M&A UPDATE:
A PATH TO GROWTH?

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

Not Currently Focused on Personal Lines

U.S. INSURANCE MERGERS AND ACQUISITIONS, P/C SECTOR, 1994-2015E (1)

INSURANCE INFORMATION INSTITUTE



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

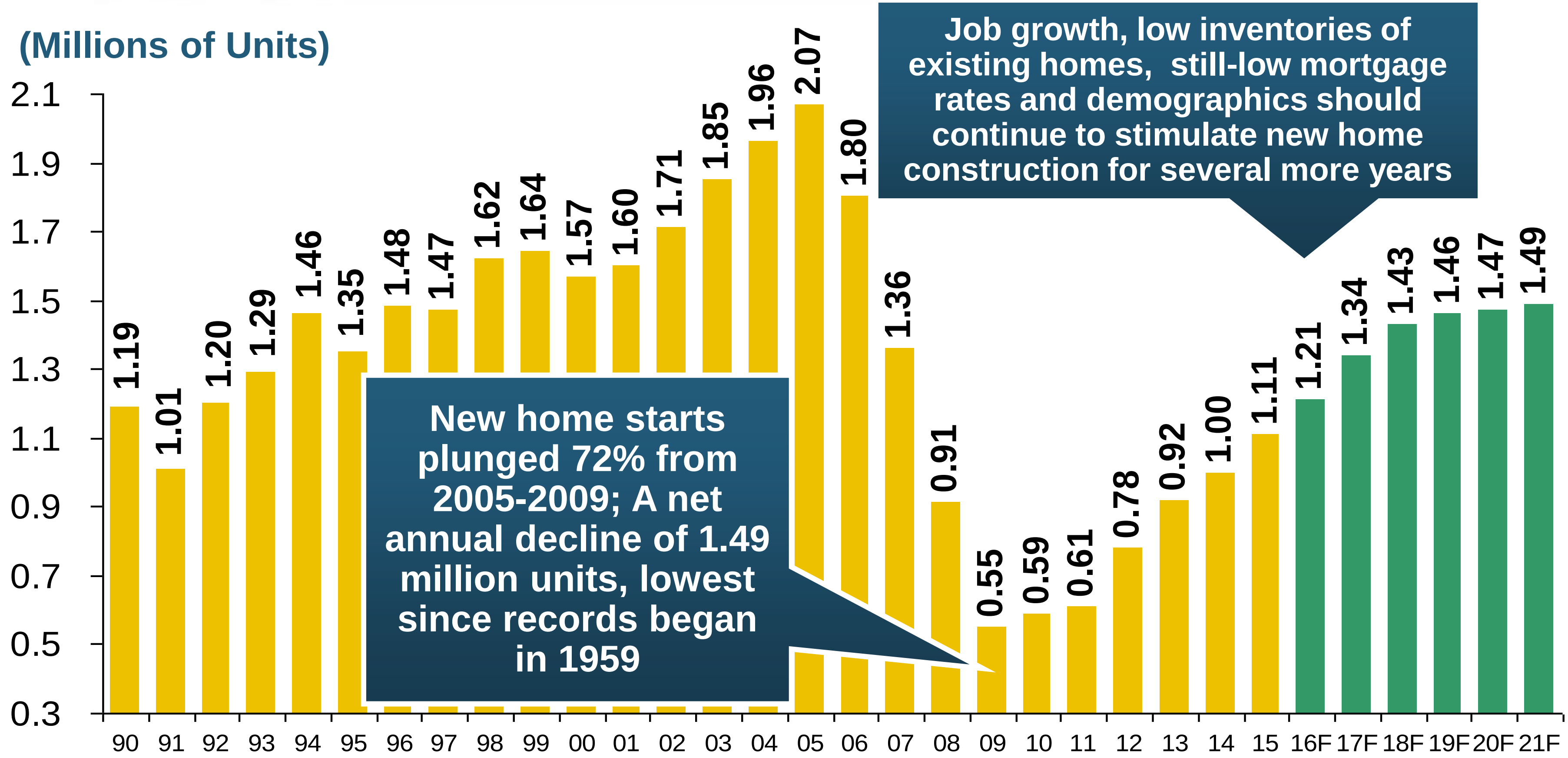
Source: Conning proprietary database; 2015 I.I.I. estimate.

Personal Lines: Economic and Demographic Considerations

Auto, Home Are Sensitive to Underlying Economic Conditions

New Private Housing Starts, 1990-2021F

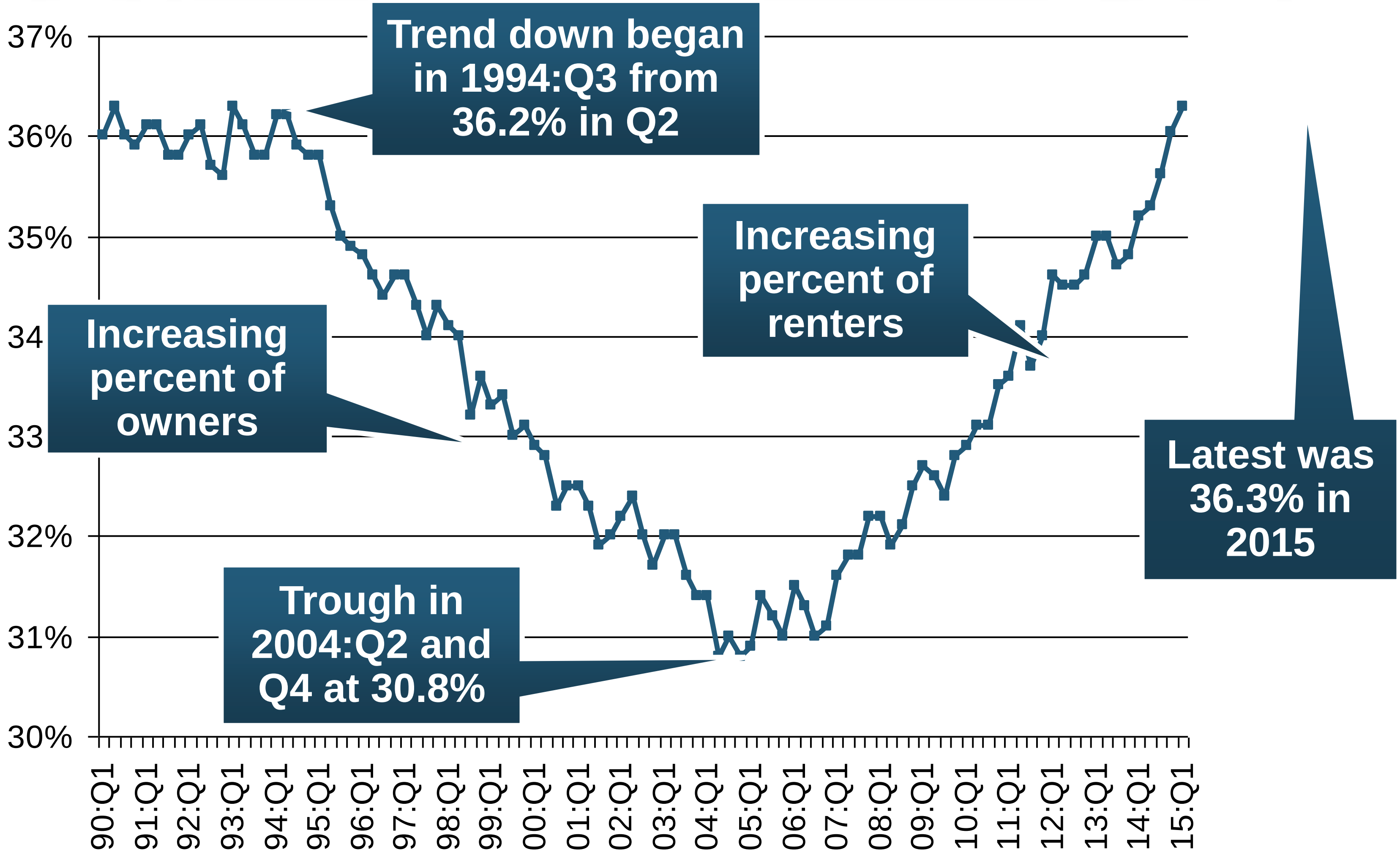
INSURANCE INFORMATION INSTITUTE



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

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (5/16 for 2016-17; 3/16 for 2018-21F; Insurance Information Institute.

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



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

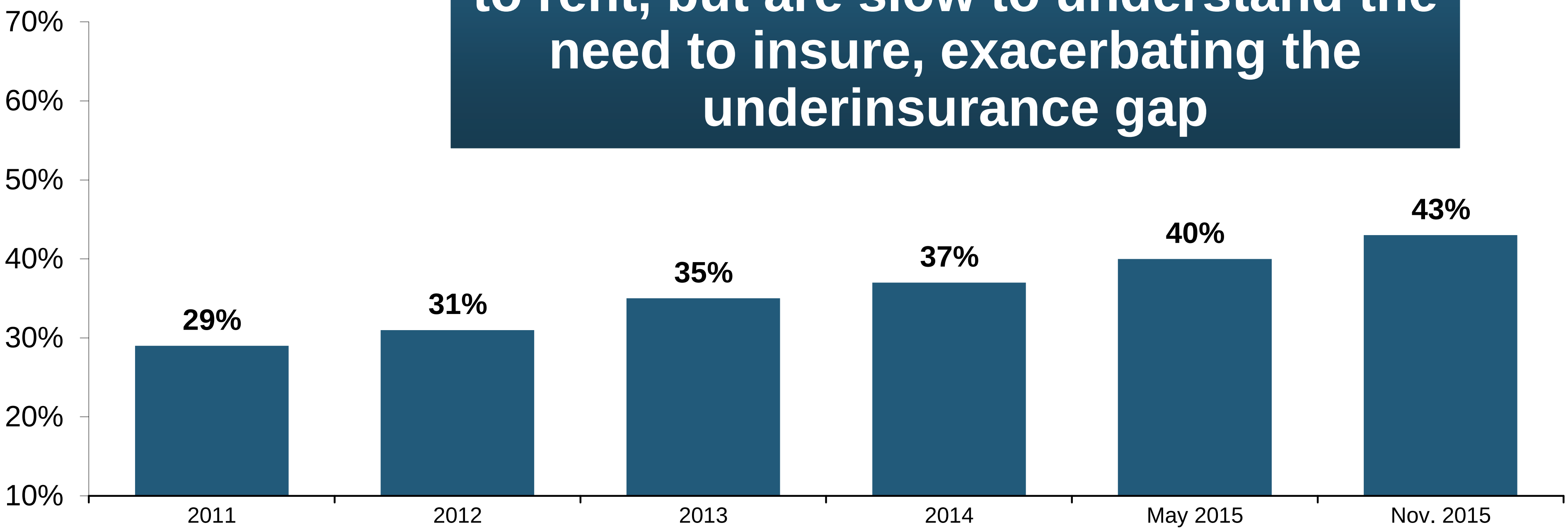
Sources: US Census Bureau, *Residential Vacancies & Home Ownership in the First Quarter of 2015* (released April 28, 2015) and earlier issues; Insurance Information Institute. Next Census Bureau report to be released on July 28, 2015. *As of Q1.

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

INSURANCE INFORMATION INSTITUTE

Q. Do you have renters insurance? [1]

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

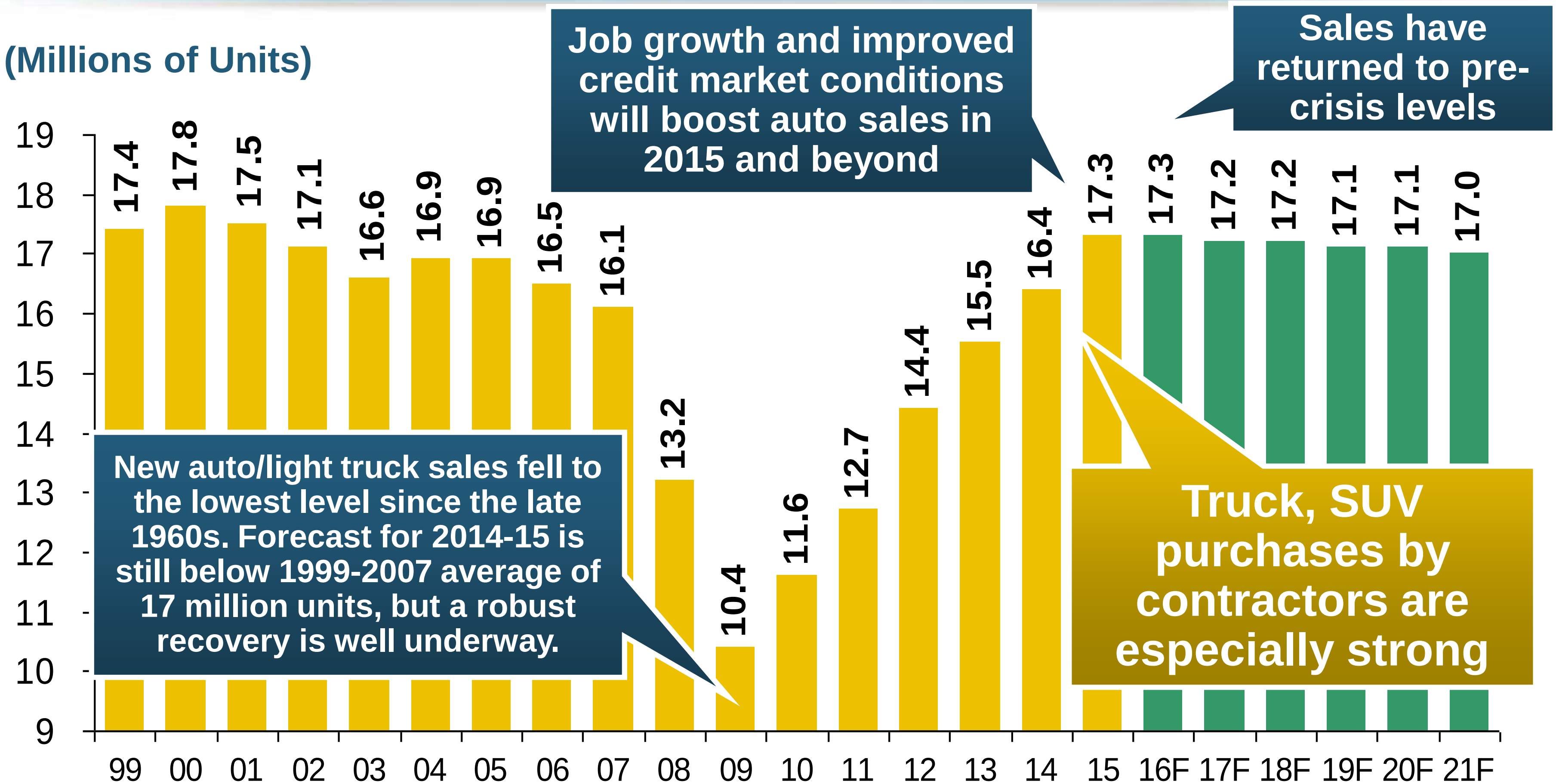


The Percentage of Renters Who Have Renters Insurance Has Been Rising Since 2011.

[1]Asked of those who rent their home.

Source: Insurance Information Institute Annual *Pulse* Survey.

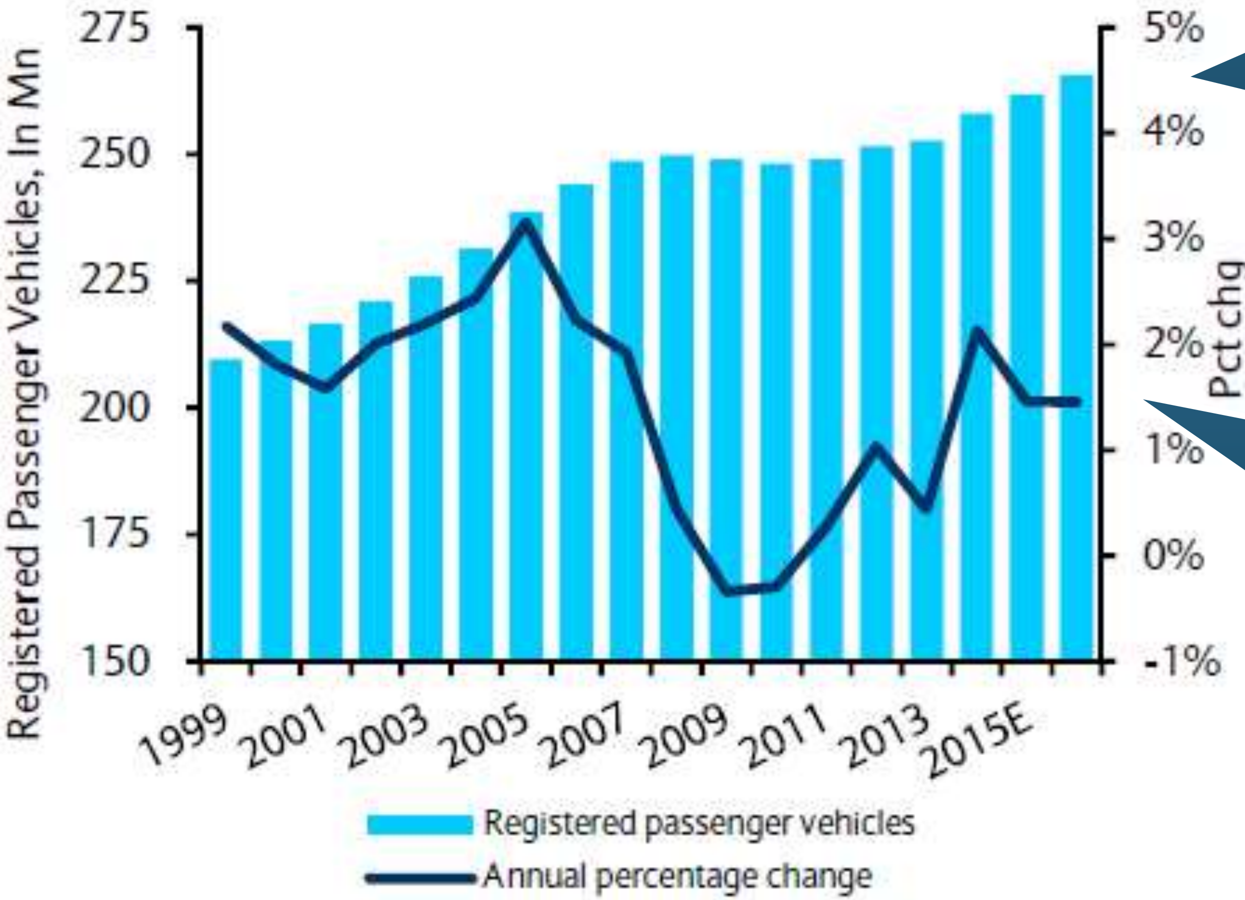
Auto/Light Truck Sales, 1999-2021F



Yearly car/light truck sales will likely continue at current levels, in part replacing cars that were held onto in 2008-12. PP Auto premium might grow by 3.5% - 5%.

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (5/16 for 2016-17; 3/16 for 2018-21F; Insurance Information Institute.

Number of Registered Passenger Vehicles in US, 1999 – 2015E

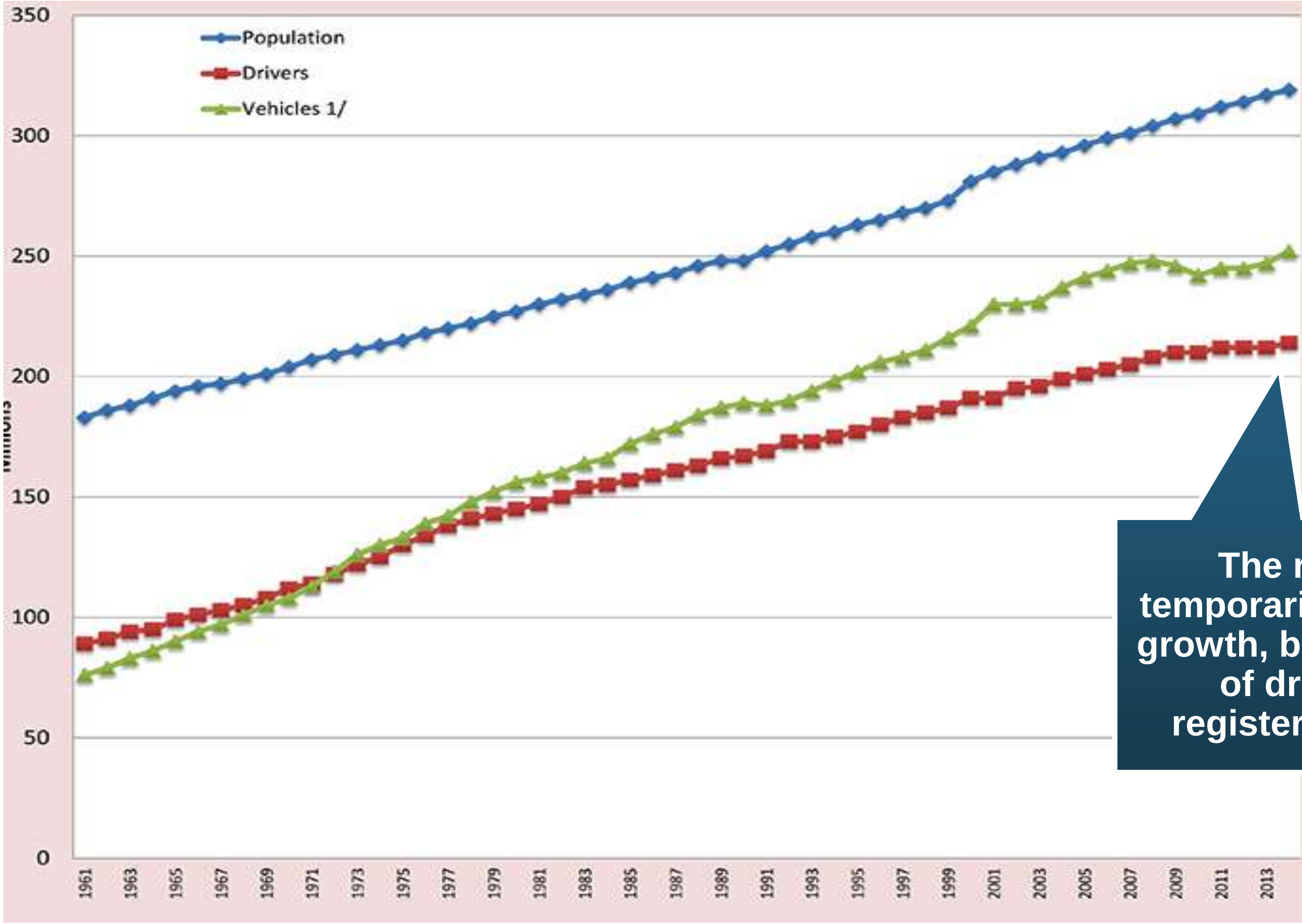


Vehicle registrations are growing once again and now finally exceed pre-crisis peak

Vehicle registrations are expected to increase at an annual rate of about 1.5% per year in 2015 and 2016

Sources: Bureau of Transportation Statistics; Barclays Capital estimates, August 2015.

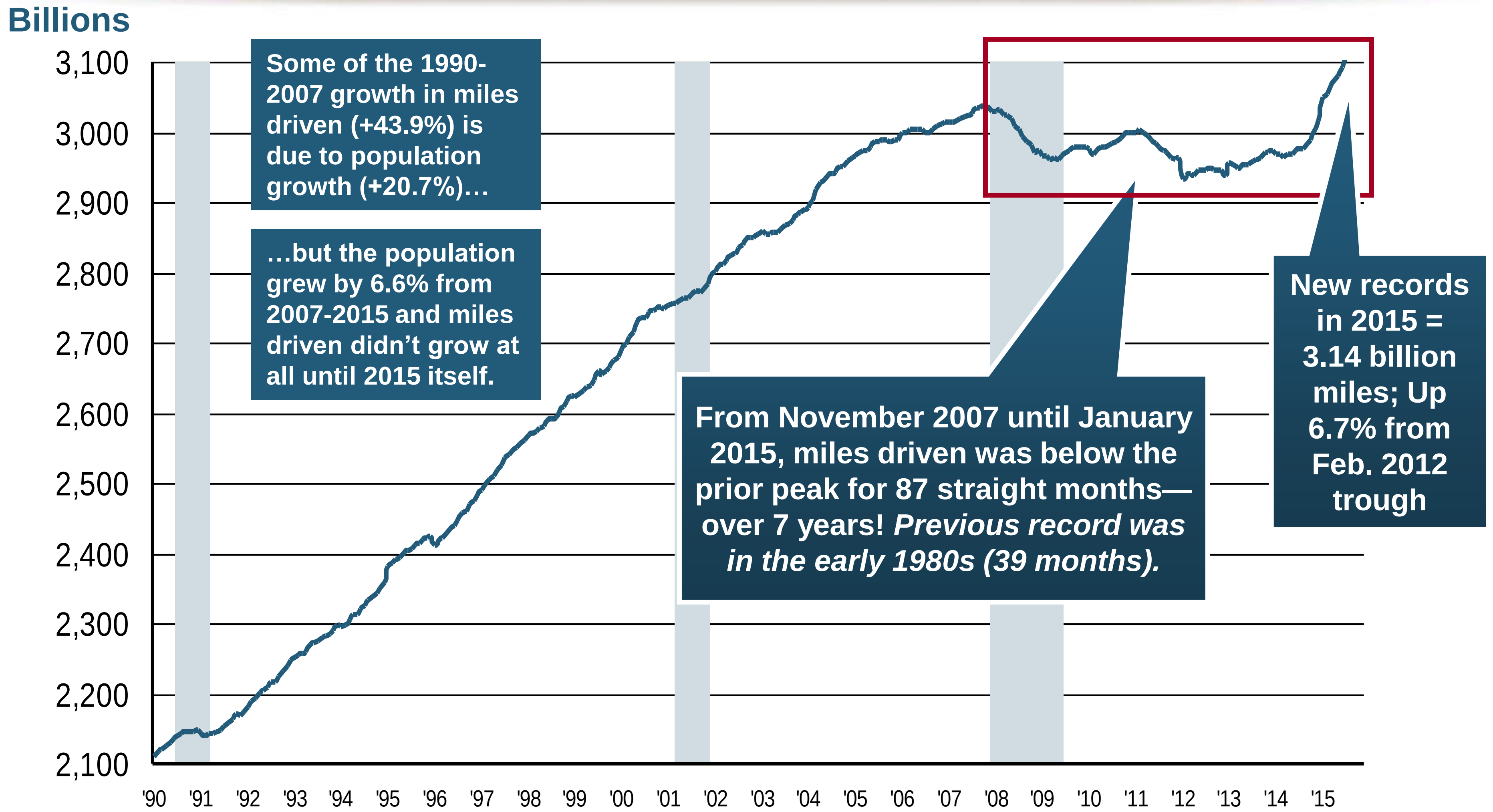
Licensed Drivers, Vehicle Registrations and Resident Population: *All UP!*



The recession temporarily interrupted growth, but the number of drivers and registered is rising!

Source: Federal Highway Administration: http://www.fhwa.dot.gov/policyinformation/statistics/2014/dv1c.cfm accessed 2/1/16; Insurance Information Institute.

America is Driving More Again (Finally!): Total Miles Driven*, 1990–2015*



*Moving 12-month total. The 2015 data are through November 2015, the latest available.
Note: Recessions indicated by gray shaded columns.

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

Change in Proportion of Persons with Driver Licenses in the US, by Age, 1983-2014

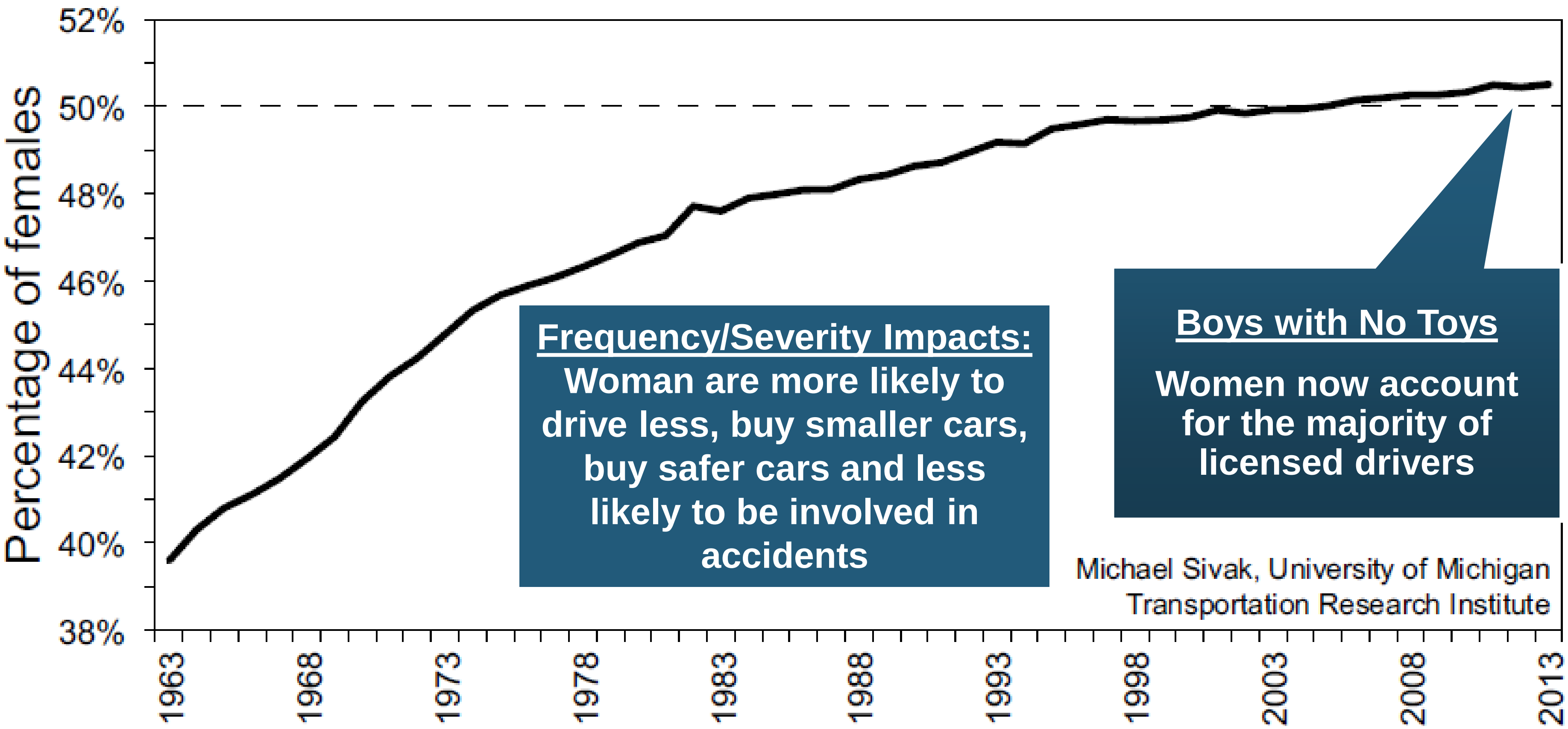
Age	Change from 1983 to 2014	Change from 2008 to 2014	Change from 2011 to 2014
16	-47.0%	-21.2%	-10.9%
17	-34.8%	-10.2%	-0.2%
18	-25.2%	-8.1%	-0.3%
19	-21.0%	-8.6%	-0.4%
20-24	-16.4%	-6.5%	-3.8%
25-29	-11.0%	-1.4%	-2.7%
30-34	-10.3%	-4.4%	-2.8%
35-39	-7.4%	-4.1%	-2.5%
40-44	-3.4%	-3.0%	-2.7%
45-49	-2.2%	-2.7%	-1.5%
50-54	-0.2%	-3.2%	-1.1%
55-59	+4.1%	-3.3%	-1.5%
60-64	+9.9%	-4.0%	-0.6%
65-69	+15.4%	-2.8%	-1.7%
≥70	+43.6%	+0.8%	-0.3%

Smaller proportions of younger drivers have licenses but not because they're all taking Uber.

The AARP crowd can't be pried away from the cars

Source: University of Michigan Transportation Research Institute, "Recent Decreases in the Proportion of Persons with a Driver's License Across All Age Groups," M. Sivak and B. Schoettle., Jan. 2016; Insurance Information Institute.

Girl Power: Females with a Driver's License as a % of All Licensed Drivers



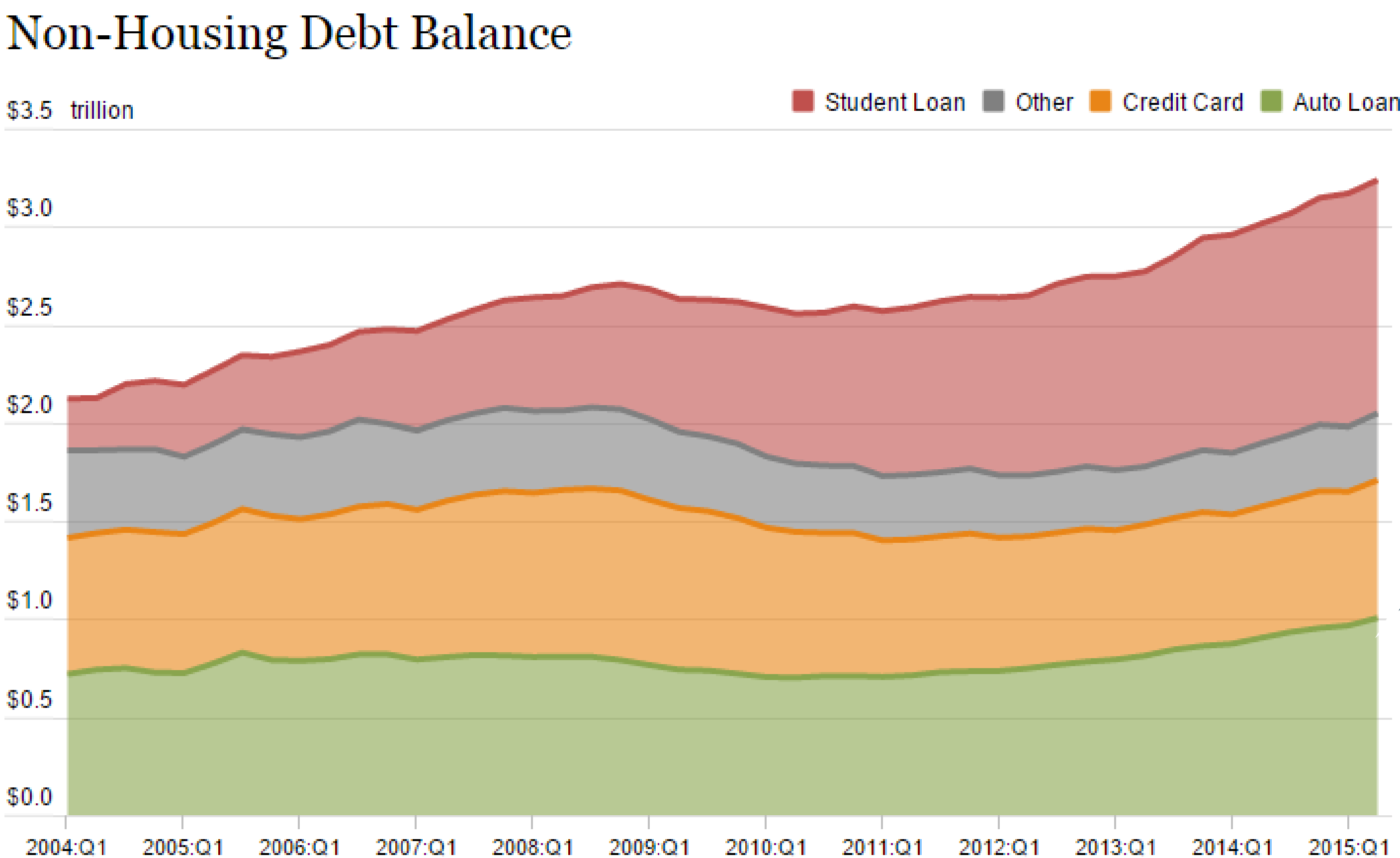
Frequency/Severity Impacts:
Woman are more likely to drive less, buy smaller cars, buy safer cars and less likely to be involved in accidents

Boys with No Toys

Women now account for the majority of licensed drivers

Source: University of Michigan Transportation Research Institute, "Female Drivers in the United States: From Minority to Majority?" by M. Sivak,, UMTRI-2016-16, May 2015; Insurance Information Institute.

Auto Loans and Other Non-Housing Debt, 2004 – 2015*



Auto loan debt outstanding reached $1T for the first time ever in Q1 2015

Banks are becoming increasingly aggressive in marketing auto loans

*As of Q1 2015.
Source: Federal Reserve Bank of NY Consumer Credit Panel/Equifax; I. I.I.

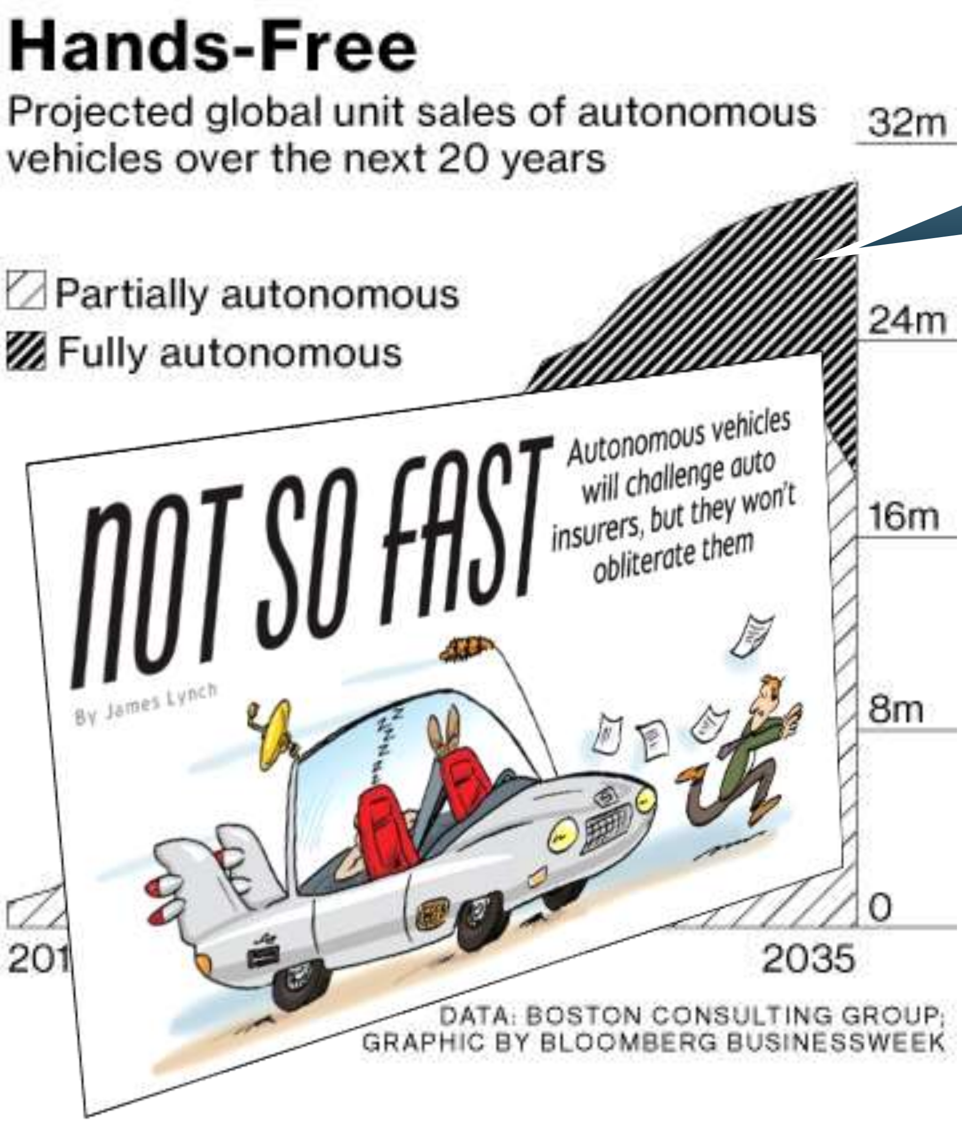
INDUSTRY DISRUPTORS

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

Thoughts on the Future

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

INSURANCE INFORMATION INSTITUTE



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?**

Source: Boston Consulting Group.

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

INSURANCE INFORMATION INSTITUTE

- **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**

TNC Ridesharing Arrangements: Insurance Applicability

INSURANCE INFORMATION INSTITUTE

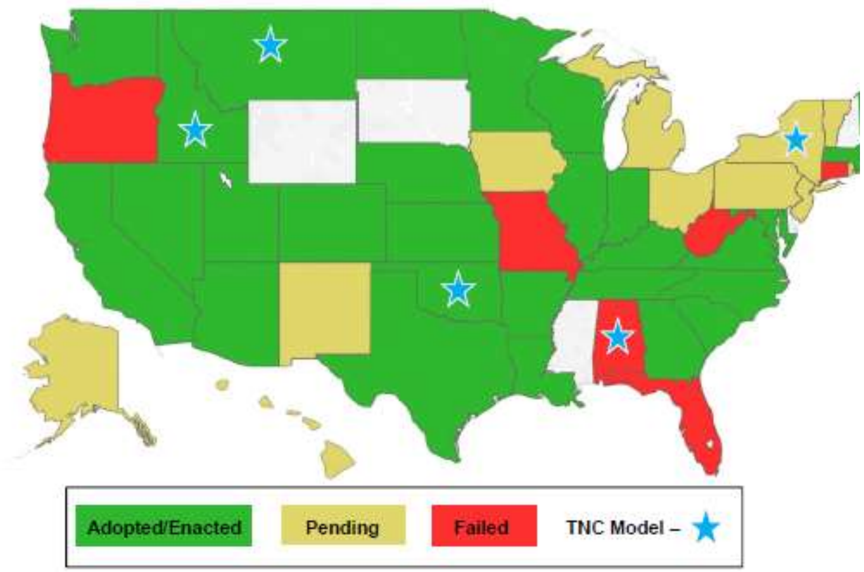
Phase	TNC Coverage
1. Driver logged into TNC App but not "matched" with a passenger	Contingent liability coverage IF personal auto coverage declined/not available ($50/100/25)*
2. A "match" is made but passenger is not in the driver's car	Primary liability, UM/UIM coverage at a higher limit ($1M)* Contingent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

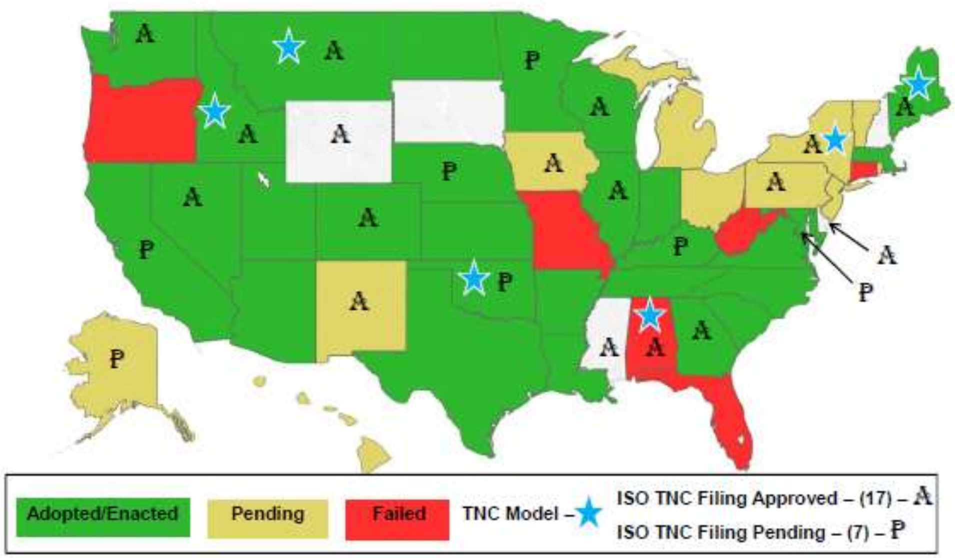
*From publically available sources as of June 2, 2015.
Source: ISO/Verisk.

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

Status Ride Sharing Legislation/Regulation



Status of ISO Filings



Source: ISO.

Homesharing Arrangements: Potential *Host* Exposure Concerns (Receives Rental Income)

- **Property**
  - Loss to host's property/furnishings
  - Loss of use
- **Liability**
  - Damage to property of traveler, traveler's guests
  - Damage to landlord's property/furnishings
  - Bodily injury to traveler, traveler's guests
- **Comment**
  - A landlord may act as a host (vacant unit)
  - A Homeowners Policy may be issued to the owner-occupant(s) of a 1, 2, 3 or 4 family dwelling

Source: ISO/Verisk.

Homesharing Arrangements: Potential *Traveler* Exposure Concerns

INSURANCE INFORMATION INSTITUTE

- **Property**
  - Loss to traveler's property
- **Liability**
  - Damage to property/furnishings of host and landlord
  - Bodily injury to traveler's guests, other tenants and visitors to building
  - Personal injury due to poor reviews
- **Comment**
  - Similar exposures currently exist for travelers at hotels, B & B's, guest houses

.
Source: ISO/Verisk.

Homesharing: ISO's Proposed Changes*

1. Policyholder Notice
   - Guidance for policyholder to contact insurer
2. Exclusion
   - Explicit exclusion for loss/damage/injury arising out of homesharing
   - Applicable to host, landlord
   - To the extent possible, preserve existing coverage for rentals that do not originate from homesharing, such as that providing for roomers, boarders
3. Coverage option
   - Property and liability coverage for loss/damage/injury arising out of homesharing
   - Applicable to host, landlord

.
*As of Oct. 6, 2015.
Source: ISO/Verisk.

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


PROPERTY DRONE CONSORTIUM

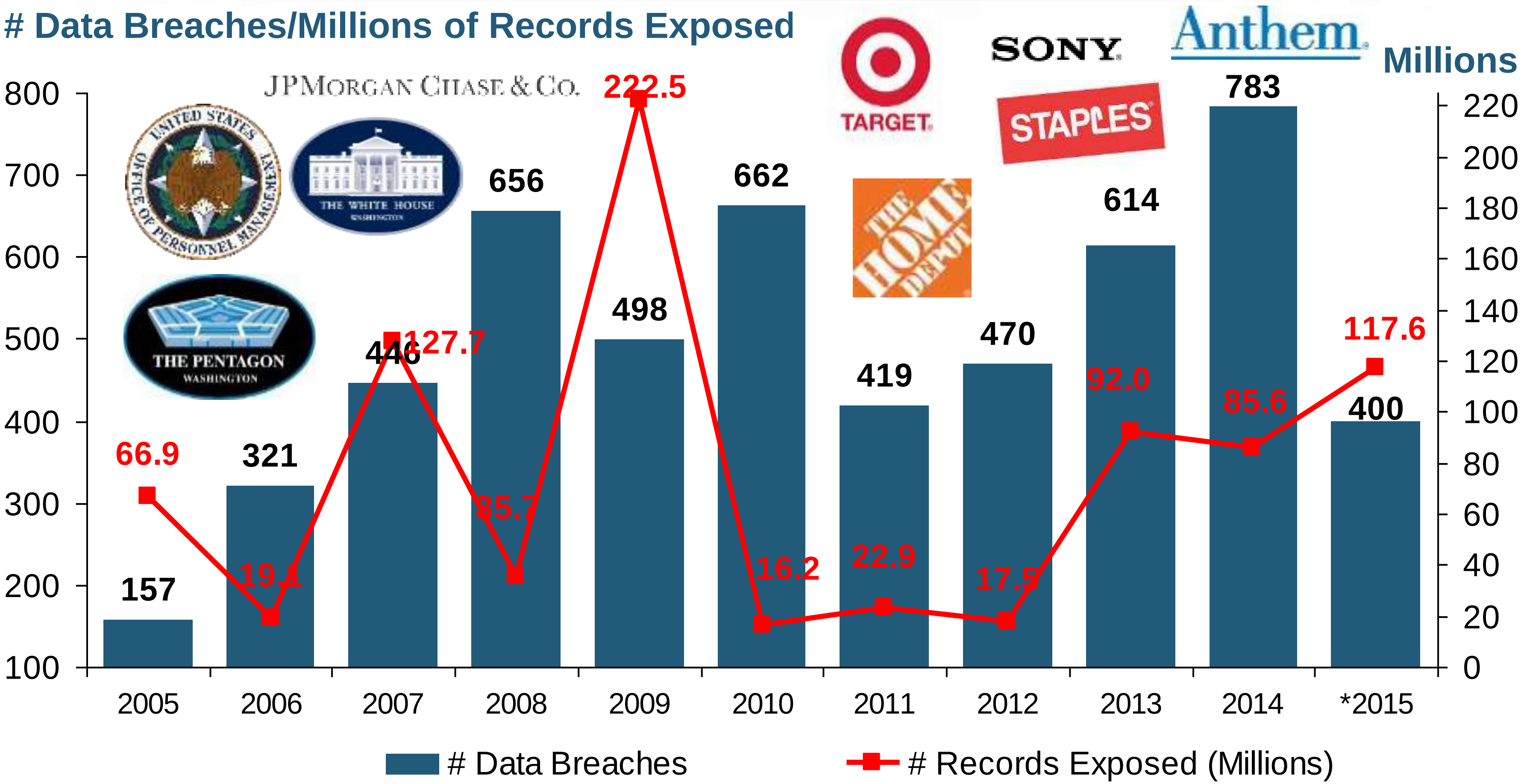
| HOME | ABOUT PDC | RESEARCH CENTER | MEDIA CENTER | CONTACT US | BLOG |

The Property Drone Consortium represents a collaboration among insurance carriers, construction industry leaders and supporting enterprises who have agreed to work together to promote research, development and the establishment of regulations for the use of Unmanned Aerial System (UAS) technology across the insurance and construction industries.

- **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**

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

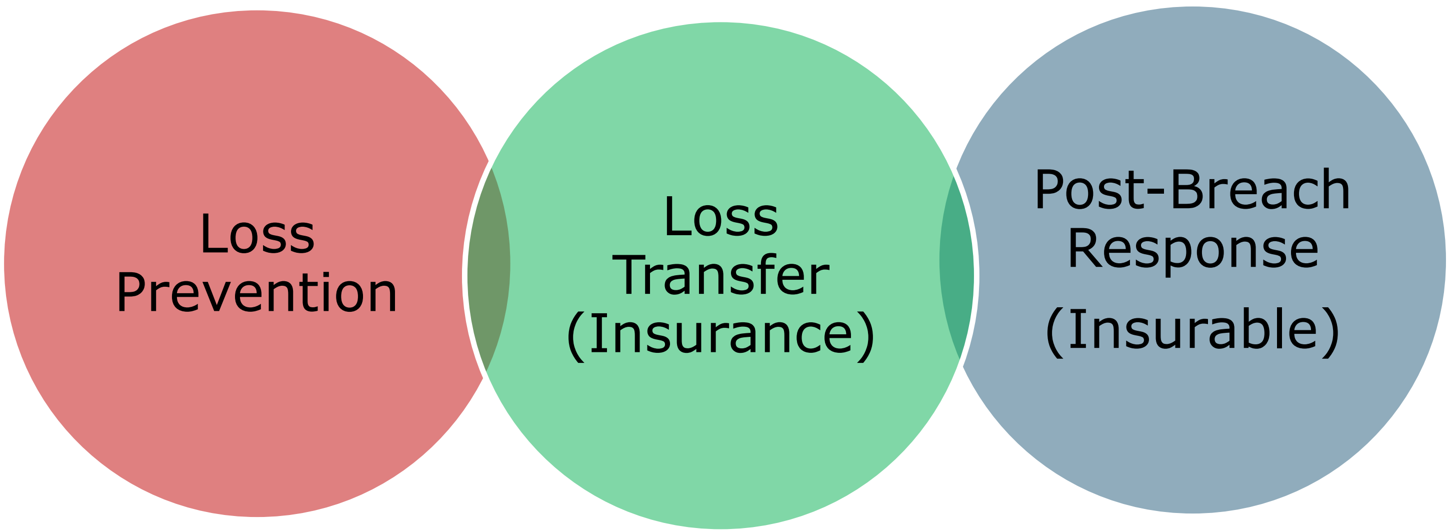
INSURANCE INFORMATION INSTITUTE



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

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.

Source: Insurance Information Institute research.

INSURANCE INFORMATION INSTITUTE

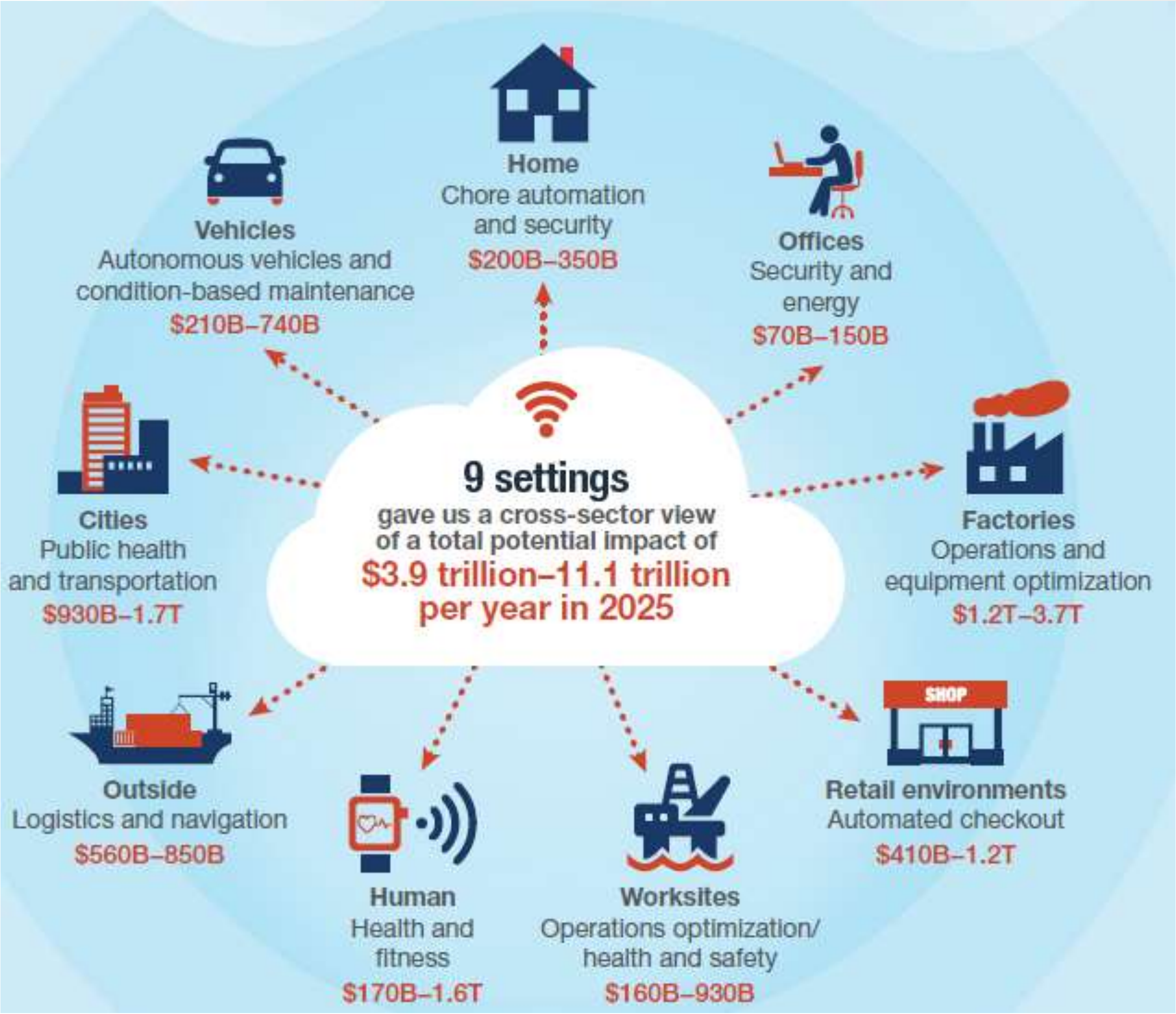
AUTO TECHNOLOGY & THE FUTURE OF AUTO INSURANCE

Technology Promises Safer Cars and Highways, *BUT* Some Analysts, Media and Many in Silicon Valley Are Predicting Doom for Auto Insurers

THE ‘INTERNET OF THINGS’

Capturing Economic Value Amid a Shifting Insurer Value Chain

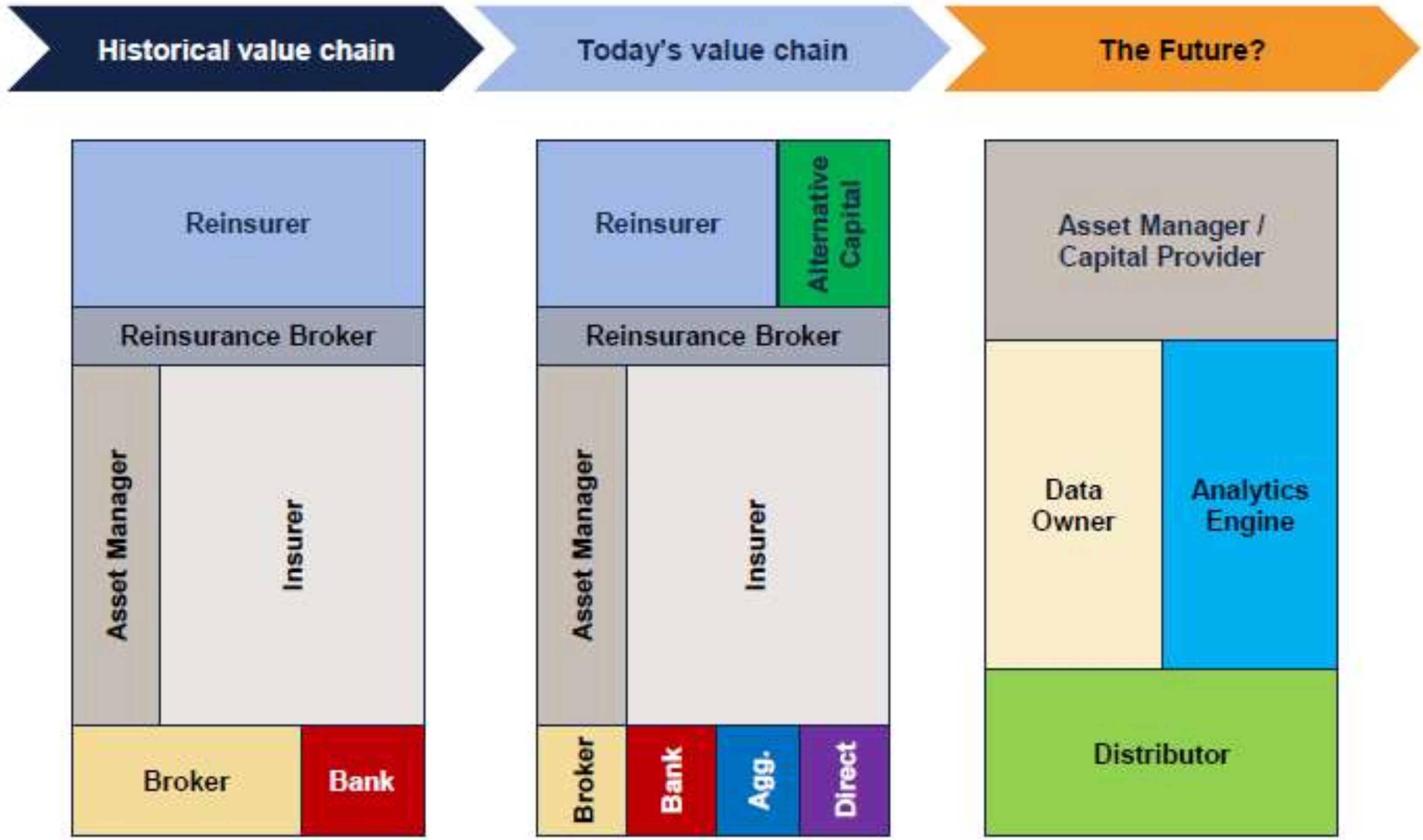
The Internet of Things and the Insurance Industry



Sources: McKinsey Global Institute, *The Internet of Things: Mapping the Value Beyond the Hype*, June 2015; Insurance Information Institute.

- **The "Internet of Things" will create trillions in economic value throughout the global economy by 2025**
- **What opportunities, challenges will this create for insurers?**
- **What are the impact on the insurance industry "value chain"?**

The Internet of Things and the Insurance Industry Value Chain

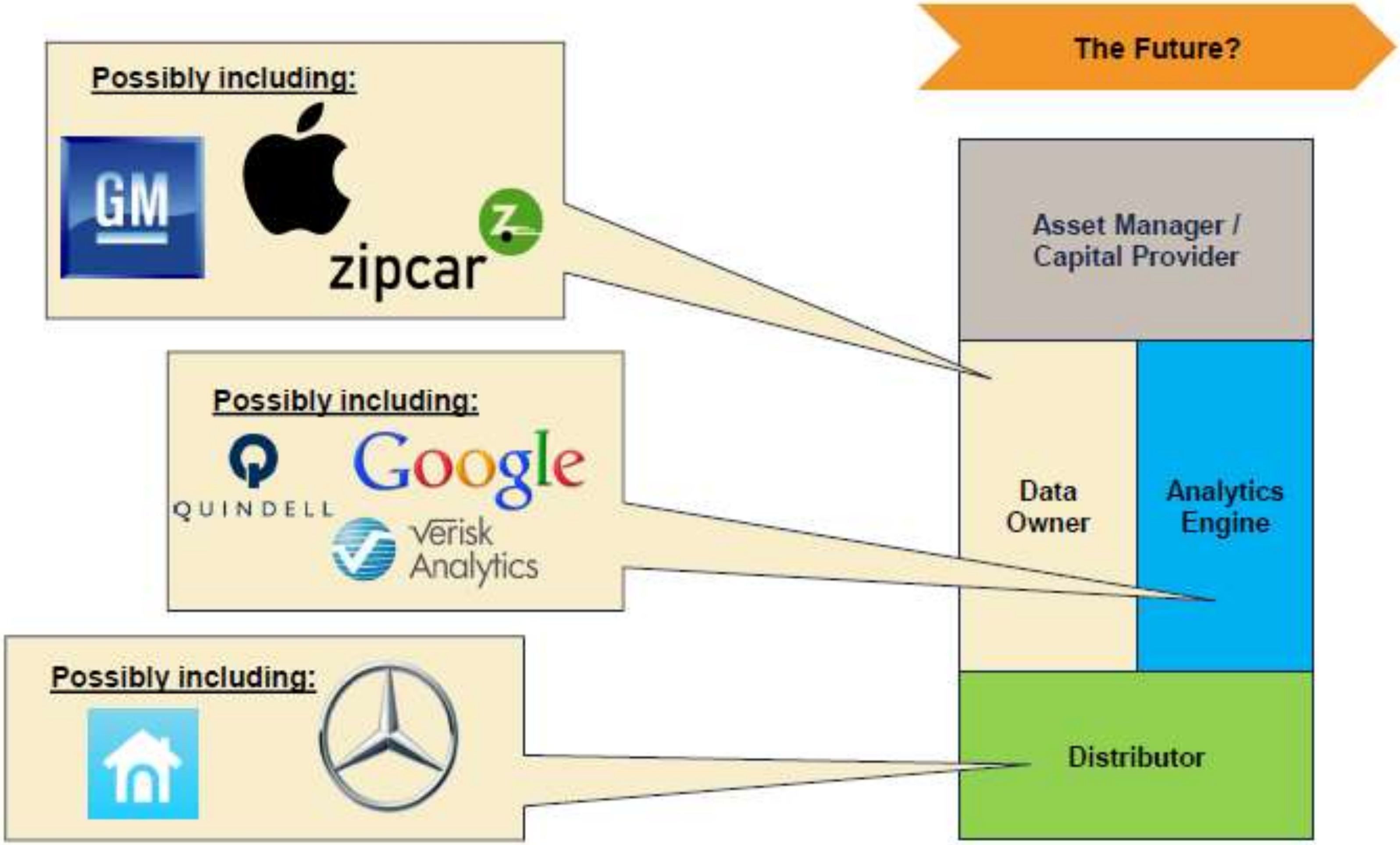


The Insurance Industry Value Chain Is Changing for Many Reasons

Source: Willis Capital Markets & Advisory; Insurance Information Institute.

The Internet of Things and the Insurance Industry Value Chain

INSURANCE INFORMATION INSTITUTE



Who owns the data? Where does It flow? Who does the analytics? Who is the capital provider?

Source: Willis Capital Markets & Advisory; Insurance Information Institute.

INSURANCE INFORMATION INSTITUTE

A NEST Case Study

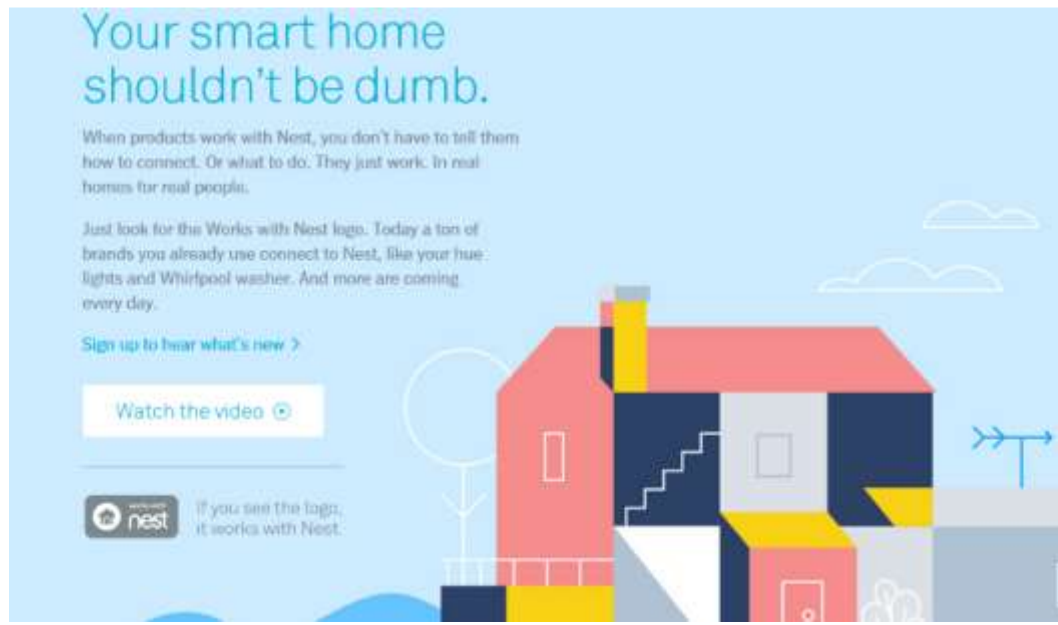
Nest: A Leader in the “Internet of Things”

Collision Course or Cooperation with the Insurance Industry?

Telematics for Your Home: The Internet of Things

INSURANCE INFORMATION INSTITUTE

- The home is the next frontier for telematics
- Rapidly becoming a crowded space
- How and with whom will insurers partner?
- Can control increasing array of household systems remotely
  - Heat, A/C
  - Fire, CO detection
  - Security Systems
  - Cameras/Monitors
  - Appliances
  - Lighting



- Technology is adaptive
  - *Uses sensors and algorithms to learn about you*

Partnerships with Insurers: Selling Safety and Savings Simultaneously

Nest is actively seeking to partner with insurers. As of Jan. 10, 2016, Nest listed 2 insurance partners offering discounts in a number of states

Source: https://nest.com/insurance-partners/ accessed 1/10/16; Insurance Information Institute research.

Recent Attacks on the Insurance Industry

Why Are Critics Suddenly More Aggressive?

What's Driving Attacks on the Insurance Industry?

INSURANCE INFORMATION INSTITUTE

- **Recent Surge in Attacks is Associated with Income Inequality Debate in the United States**
  - Attacks not confined to auto insurance (e.g., Workers Comp, Health)
  - Not confined to insurance (banks, lending in general, student loans)
- **Politics, Economics, Regulation & Demographics Are Principal Drivers**
  - CFA/CR and others (ProPublica) emboldened in current environment
  - Dodd-Frank Act stuffed with income inequality mandates and studies
  - FIO now studying auto insurance affordability; Wants to create index.
  - Definition of "fairness" is shifting
- **CFA Has Been Able to Attack Certain Rating Factors Based on New Perception of Fairness (which is independent of actual risk)**
  - **Education** **Occupation** **Marital Status** **Gender**
  - **Age** **Credit Profile** **Location** ***"Price Optimization"***
- **All of These Are Vulnerable to Attack in the Current Environment**
- **Infinite Number of Quotes Online→CFA Uses to Highlight Perceived Inequities**

Handout for Government Affairs Staff Attending NAIC Meeting

INSURANCE INFORMATION INSTITUTE

INSURANCE INFORMATION INSTITUTE

The Truth about Auto Insurance?

Driving records alone offer an incomplete picture

Rating factors used by auto insurers to price policies have come under attack in recent months. Consumer Reports (CR) and the Consumer Federation of America (CFA) have made headlines by purporting to demonstrate U.S. auto insurers use certain rating factors unfairly, including a driver's credit-based insurance score, gender and marital status. They have also criticized the practice of "price optimization," a term defined by the Casualty Actuarial Society (CAS) as "the supplementation of traditional actuarial loss cost models to include quantitative customer demand models for use in determining customer prices."

The CR and CFA analyses were misleading and overlooked the ways in which competition in auto insurance markets is enhanced and consumers benefit when a wide variety of rating factors beyond a person's driving record are used to determine risk.

Key factors include:

Credit

- Regulators in 47 U.S. states allow the use of credit-based insurance scores.
- "*Credit scores are effective predictors of risk under automobile policies.*" (2007 Federal Trade Commission report)
- 76 percent of consumers exhibit good or fair credit management behavior. (FICO)

Gender

- Women drivers tend to get into fewer and less serious accidents than men.
- Men were behind the wheel in nearly three of every four fatal crashes nationwide (2003-2012). (U.S. Department of Transportation's National Highway Safety Administration)

Marital Status

Married drivers tend to get into fewer and less serious accidents than unmarried drivers, based on the claims experience U.S. auto insurers have compiled over a period of decades.

Price Optimization

- Price Optimization allows insurers to rely on "*more objective, quantitative information about the judgmental aspects of the rate-setting process instead of reliance primarily on anecdotal evidence.*"
- Consumers benefit because, "*Price optimization may improve rate stability and lower an insurer's long-term cost for providing coverage and limit policyholder disruption. If consumers realize more stability through price optimization, policyholder discounts for longevity may increase over time.*" (National Association of Insurance Commissioners' Casualty Actuarial and Statistical Task Force draft white paper)

Consumers who believe they are being overcharged or underserved by their insurance company can—and should—shop around for a better deal. The U.S. auto insurance industry is highly competitive, precisely because different insurers give different weights to a variety of underwriting criteria.

Resources

I.I.I. consumer education articles

- What Determines the Price of My Auto Insurance Policy? www.iii.org/article/what-determines-price-my-auto-insurance-policy
- How Can I Save Money on Auto Insurance? www.iii.org/article/how-can-i-save-money-auto-insurance

I.I.I. presentations and research

- Price Optimization in Auto Insurance Markets: Actuarial, Economic and Regulatory Considerations: www.iii.org/presentation/price-optimization-in-auto-insurance-markets-actuarial-economic-and-regulatory-considerations-071715
- Facts & Statistics: Auto Insurance: www.iii.org/fact-statistic/auto-insurance
- Issues Update: Credit Scoring and Insurance: www.iii.org/issue-update/credit-scoring

I.I.I. video

The I's on Insurance—Auto Coverage: You're in the Driver's Seat: www.iii.org/video/the-is-on-insurance-auto-coverage-youre-in-the-drivers-seat

I.I.I. subject matter experts

- Dr. Robert Hartwig, president & economist: bobh@iii.org
- James Lynch, FCAS MAAA, chief actuary and director of Information Services: jamesl@iii.org

I.I.I. media contact:

- Michael Barry, vice president, Media Relations: michaelb@iii.org

For more information about insurance: www.iii.org

INSURANCE INFORMATION INSTITUTE

PRICE OPTIMIZATION

Price Optimization Was the Sharpest Area of Attack the Industry Faced in 2015

Price Optimization: What Is It?

INSURANCE INFORMATION INSTITUTE

1.4 Cents Per Ounce ($5.49 for 24 Bottles)

U.S. Insurers Don't Do This!!!

5.9 Cents Per Ounce ($23.76 for 24 Bottles)

320% Price Difference! Does It Cost $18.25 to Unpack the Bottles and Keep Them Cold?

Price Optimization: What Is It?

- Who Knows?
  - No One Has Successfully Defined It
  - At Least Seven Definitions From States, Vendors, NAIC, Others
  - Some Have Talked About
    - Price Elasticity of Demand
    - ‘Loyalty Penalty’
  - Use of ‘Sophisticated Tools and Models to Quantify Other Business Considerations’ (profitability/retention) (NAIC/I.I.I.)

Price Optimization: What Is The Objection?

- What Is the Objection? Detractors Say . . . .
  - ‘Systematic Component to Rate Setting Unrelated to Expected Losses or Expenses’ (It’s a Rating Variable, and It’s Not Based on Likelihood of Loss, So It’s Illegal.)
  - ‘Price Gouging’
    - Poor Get Overcharged
    - Most Loyal Customers Get Mistreated

INSURANCE INFORMATION INSTITUTE

FOUR FACTS ABOUT PRICE OPTIMIZATION

1. Insurers Have Always 'Optimized' – With Regulator Knowledge & Approval

INSURANCE INFORMATION INSTITUTE

Disposition

Disposition Date: 03/11/2015
Effective Date (New): 05/01/2015
Effective Date (Renewal): 05/01/2015
Status: Approved

Comment:

REDACTED

Company Name:	Overall % Indicated Change:	Overall % Rate Impact:	Written Premium Change for this Program:	Number of Policy Holders Affected for this Program:	Written Premium for this Program:
	5.700%	2.600%	$169,000	632	$6,483,000
	17.400%	2.600%	$898,000	3,649	$34,492,000
	-3.800%	3.400%	$1,859,000	15,942	$54,331,000
	-6.300%	3.200%	$170,000	1,071	$5,284,000
	7.500%	2.700%	$955,000	5,793	$35,290,000

Overall Rate Information for Multiple Company Filings	
Overall Percentage Rate Indicated For This Filing	4.500%
Overall Percentage Rate Impact For This Filing	3.000%
Effect of Rate Filing-Written Premium Change For This Program	$4,051,000
Effect of Rate Filing - Number of Policyholders Affected	27,087

Regulators Have Approved of the Practice for Decades

Companies Temper Increases Based on 'Market Judgment'

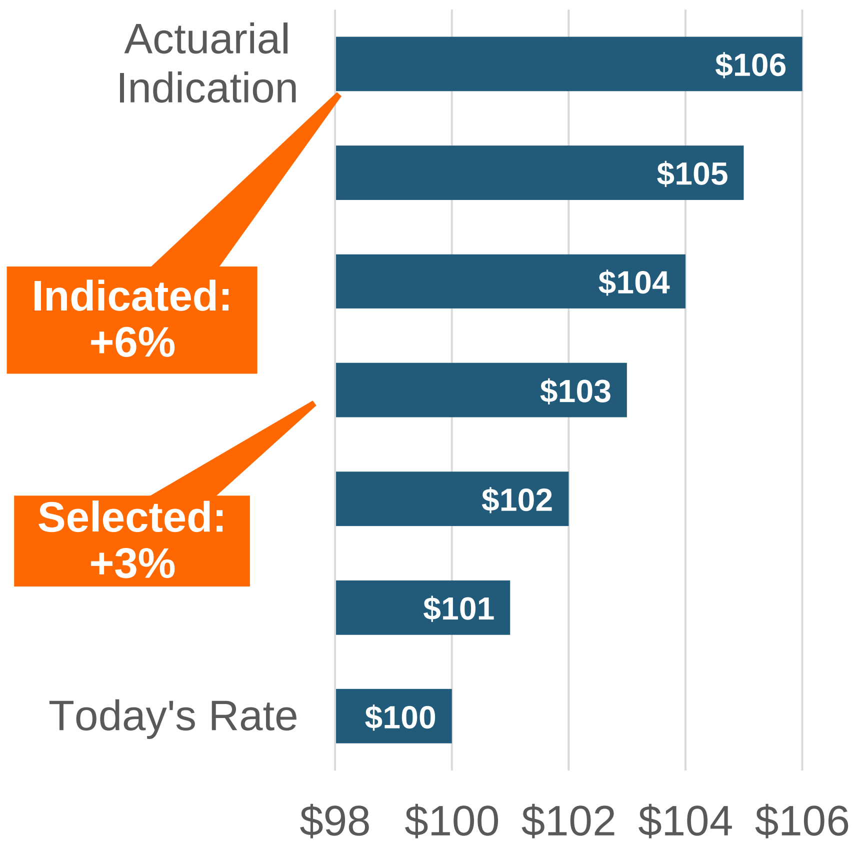
Sources: System for Electronic Rate and Form Filing (SERFF) via SNL Financial; Insurance Information Institute.

Other Examples: Rate Capping, Teen Drivers

2. Optimization Is Not Price Gouging

- Traditional Practice
  - Used 'Seat-of-the-Pants' Judgment to Discount Off Indication
- What's New
  - Software Informs the Judgment
- Never Exceeds Actuarial Indication

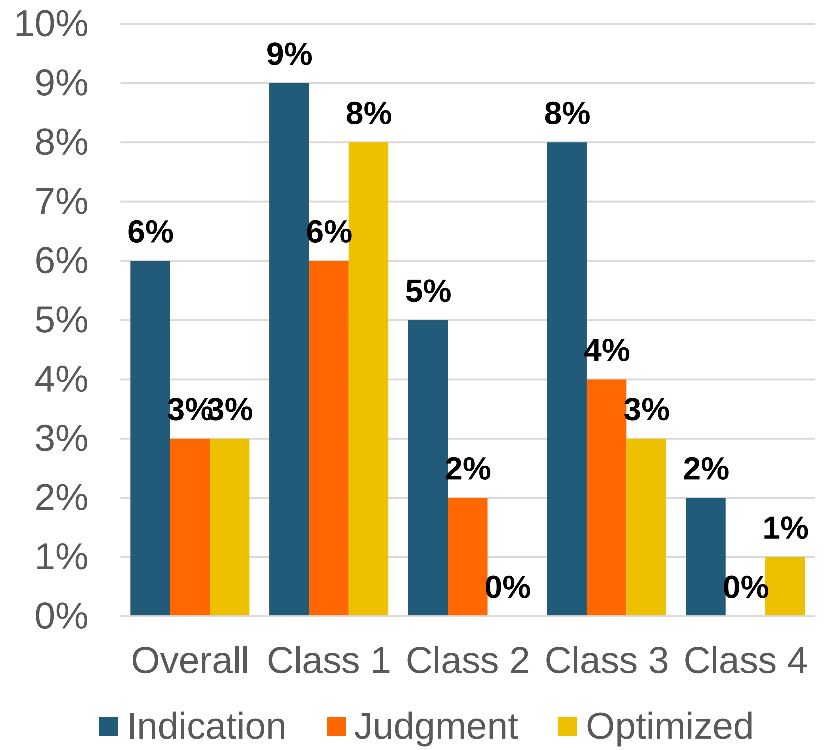
An Example



3. Optimization Doesn't Raise Rates; It Distributes the Rate Change

- As Practiced in U.S.
  - Remains True to Cost-Based Price
  - Applied to Classes, Not Individuals
- Rates Don't Exceed Actuarial Indication

Example (cont'd): There Are Many Reasonable Ways to Achieve Reasonable Rates.



The Latest

NAIC Task Force Concluded (November)

Force believes the following practices , at a minimum, are inconsistent with statutory requirements that "rates shall not be ... unfairly discriminatory:"

a. Price elasticity of demand.
b. Propensity to shop for insurance.
c. Retention adjustment at an individual level.
d. A policyholder's propensity to ask questions or file complaints.

Focus Appears to Be On Potential Use of Tool on Individuals

- Restrictions/bans in 16+ States, D.C.

- Illinois Declined to Issue Regulation

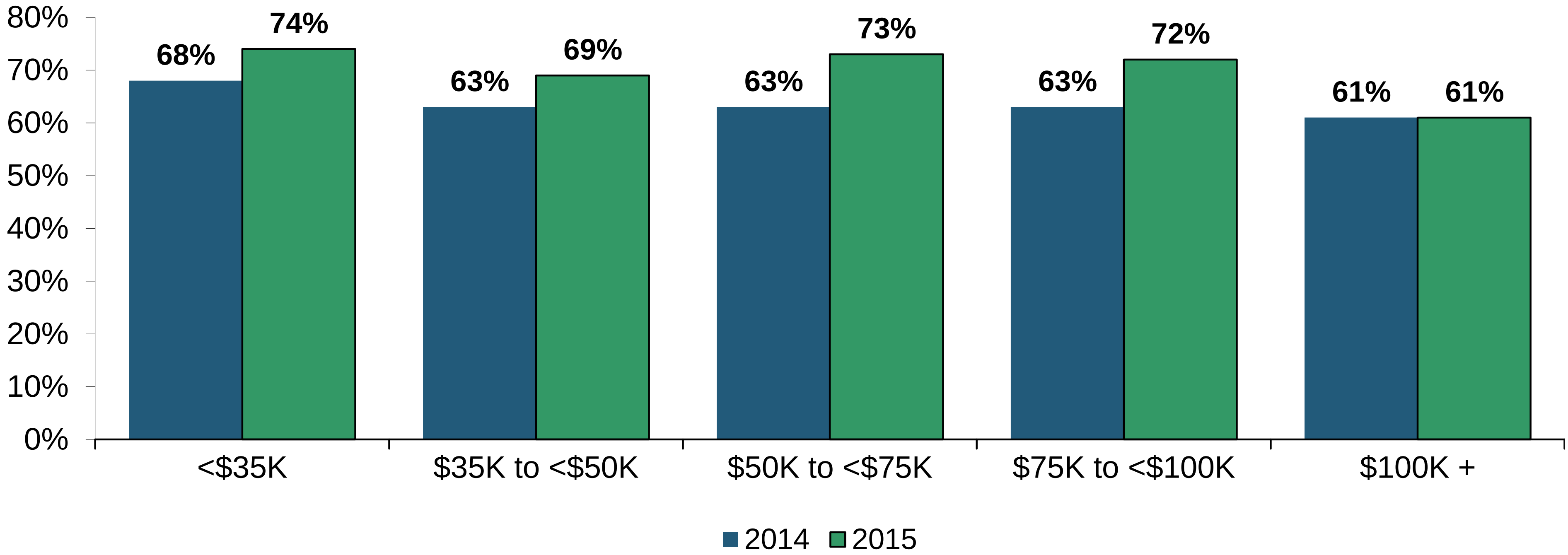
'Illinois has a highly competitive auto and homeowners' insurance market … I would be delighted to host any members of … consumer organizations to visit with me, in person, to share the data they cite as it is inconsistent with what I have reviewed.'

- Acting Insurance Director Anne Melissa Dowling
January 2016

4. Low Income Drivers Are Just as Likely to Shop As Anyone Else

INSURANCE INFORMATION INSTITUTE

Percent of Those With Auto Insurance Who Said They Compared Prices on Renewal, by Income, 2014-2015

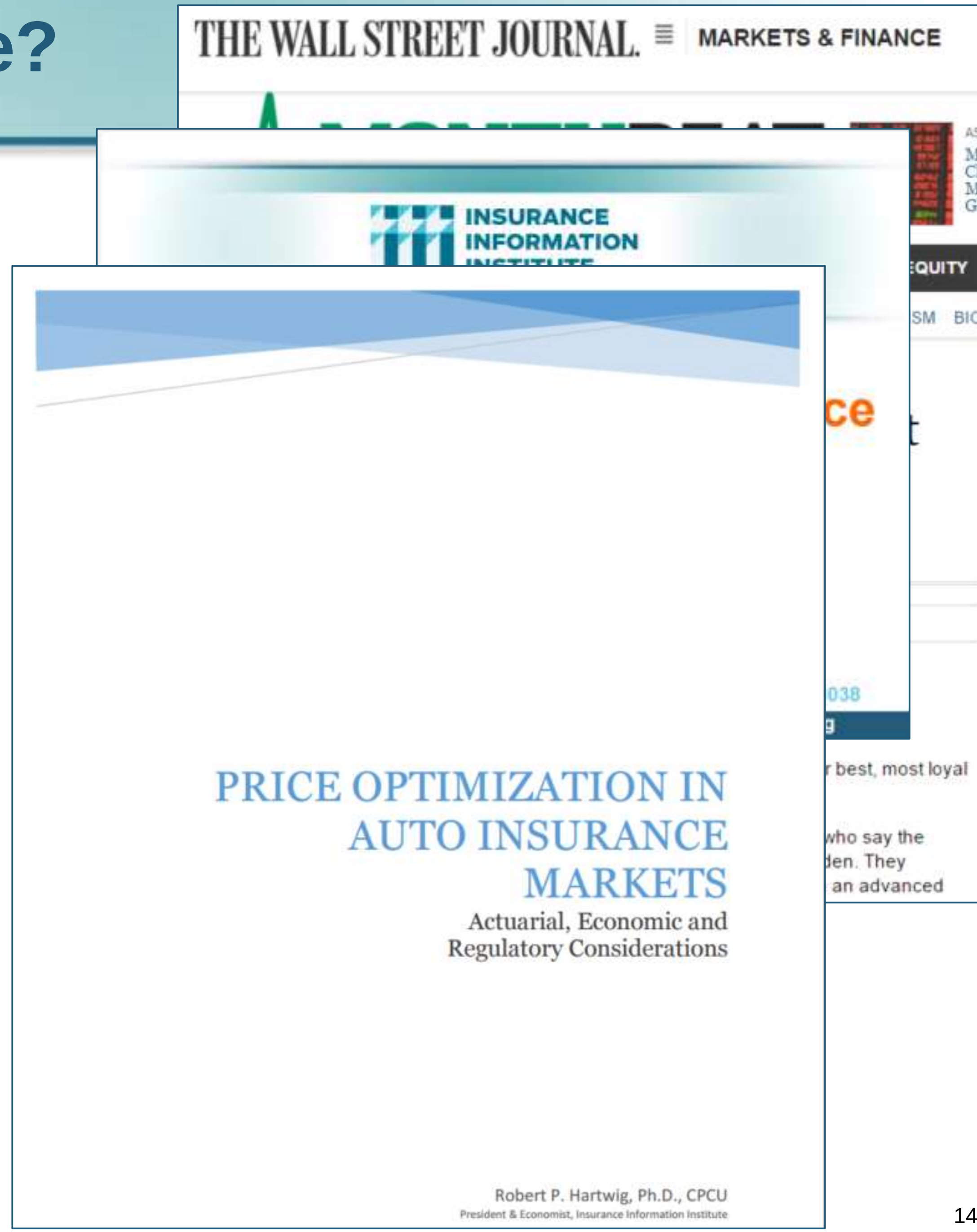


Low- to Moderate-Income Respondents Were More Likely to Say They Compare Prices.

Source: Insurance Information Institute Annual *Pulse* Survey.

What Has I.I.I. Done?

- Media
- Industry
- Policymakers
- The Message:
  - ‘the optimal way … is not through prohibitions but through observation, learning and studying the impacts on insurance markets and consumers and only then making recommendations as necessary.’
    - Robert Hartwig, NCOIL, July 17, 2015



INSURANCE INFORMATION INSTITUTE

Insurance Information Institute Online:

www.iii.org

Thank you for your time and your attention!

Twitter: twitter.com/bob_Hartwig