



Claims, Concerns and Kool Aid: Personal Lines Insurance in 2017 & Beyond

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■ P/C Financial Overview

- ◆ Profitability & Growth Environment

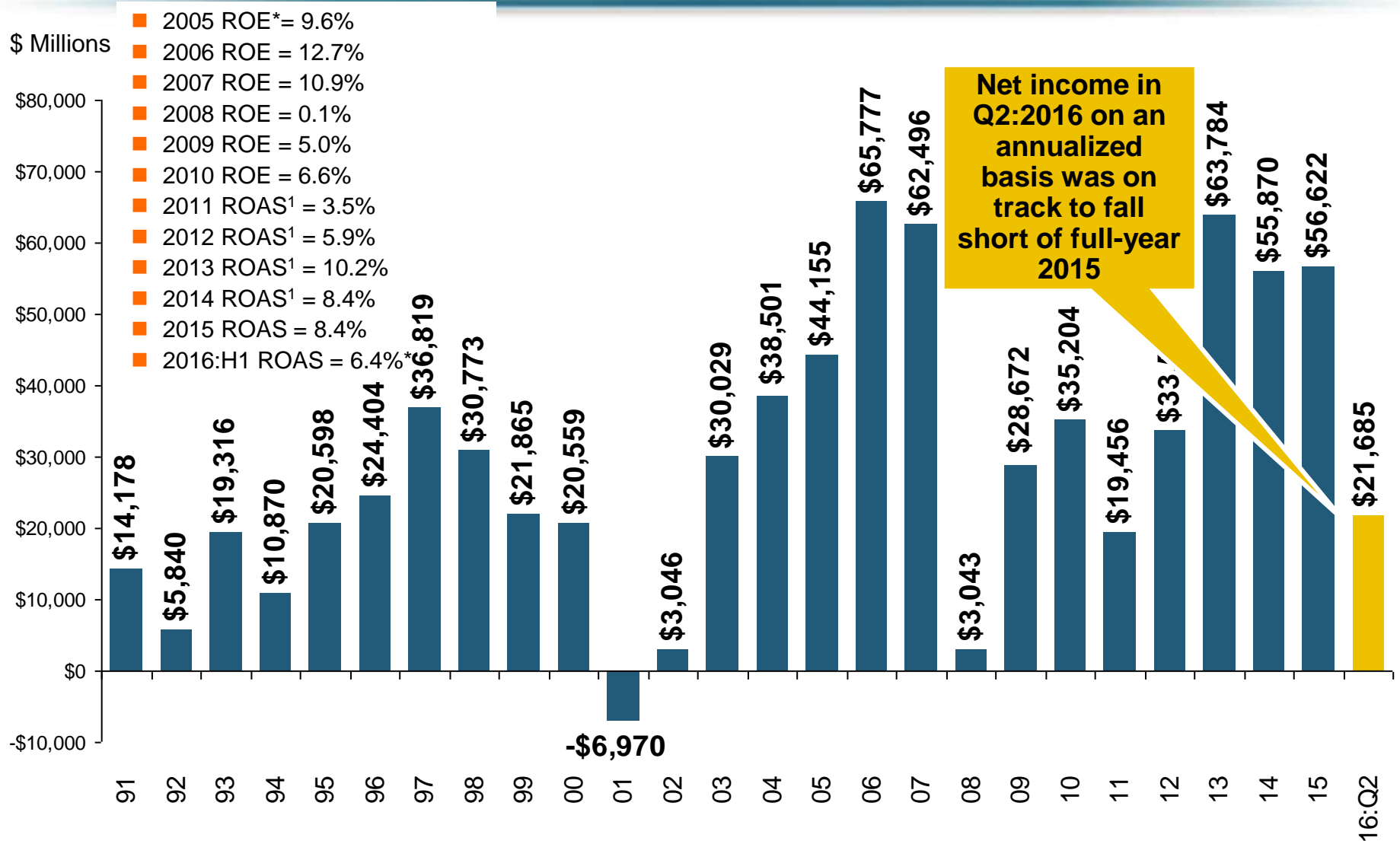
■ Personal Lines Performance

■ Claim Trends

- ◆ Adverse Auto Claim Trends
- ◆ Causes, Concerns and Consequences
- ◆ Catastrophe Claim Trends in Homeowners Insurance

■ Disruptors, Technology & the Insurance Industry Value Chain

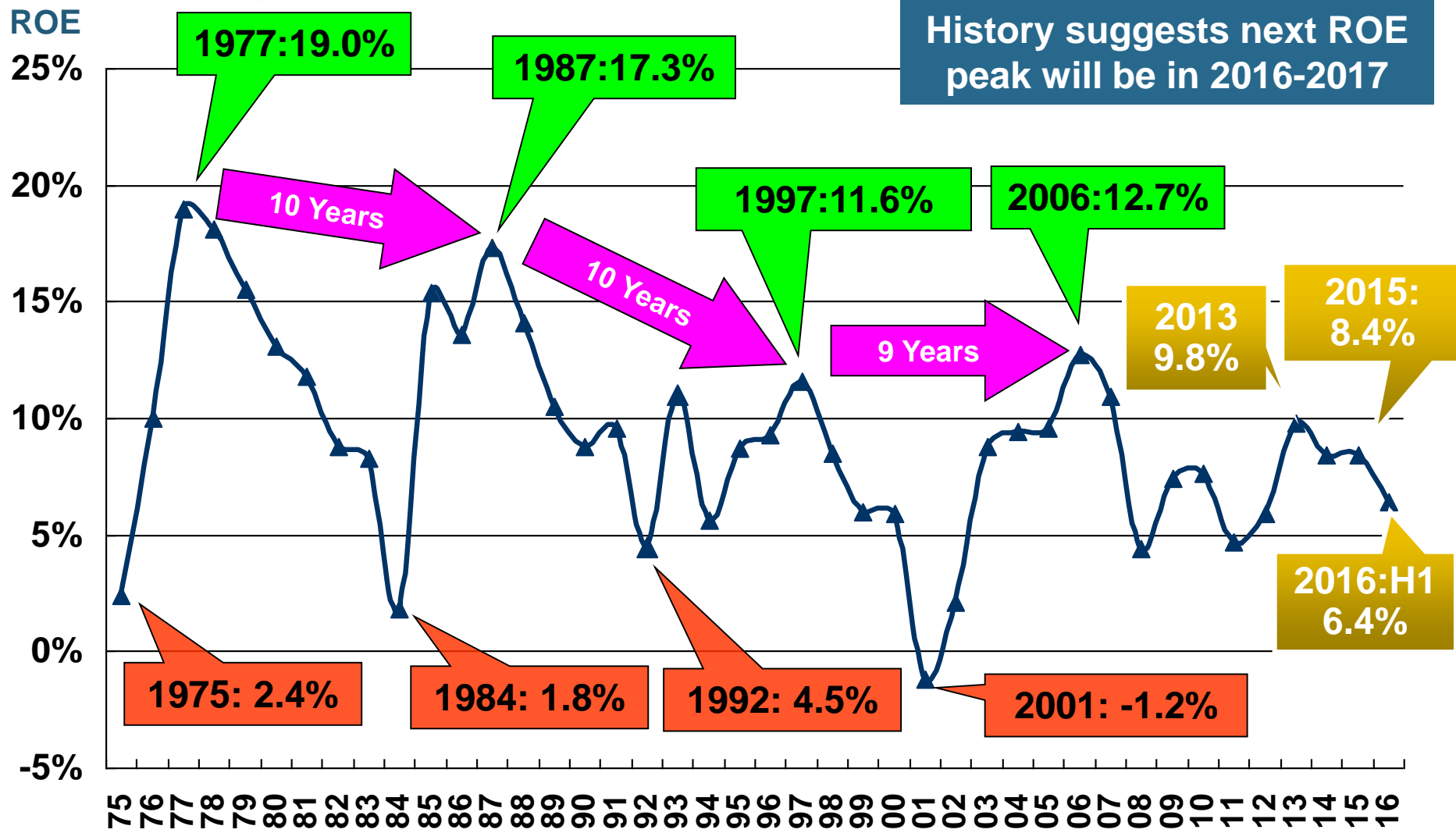
P/C Industry Net Income After Taxes 1991–2016:Q2



*ROE figures are GAAP; ¹Return 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

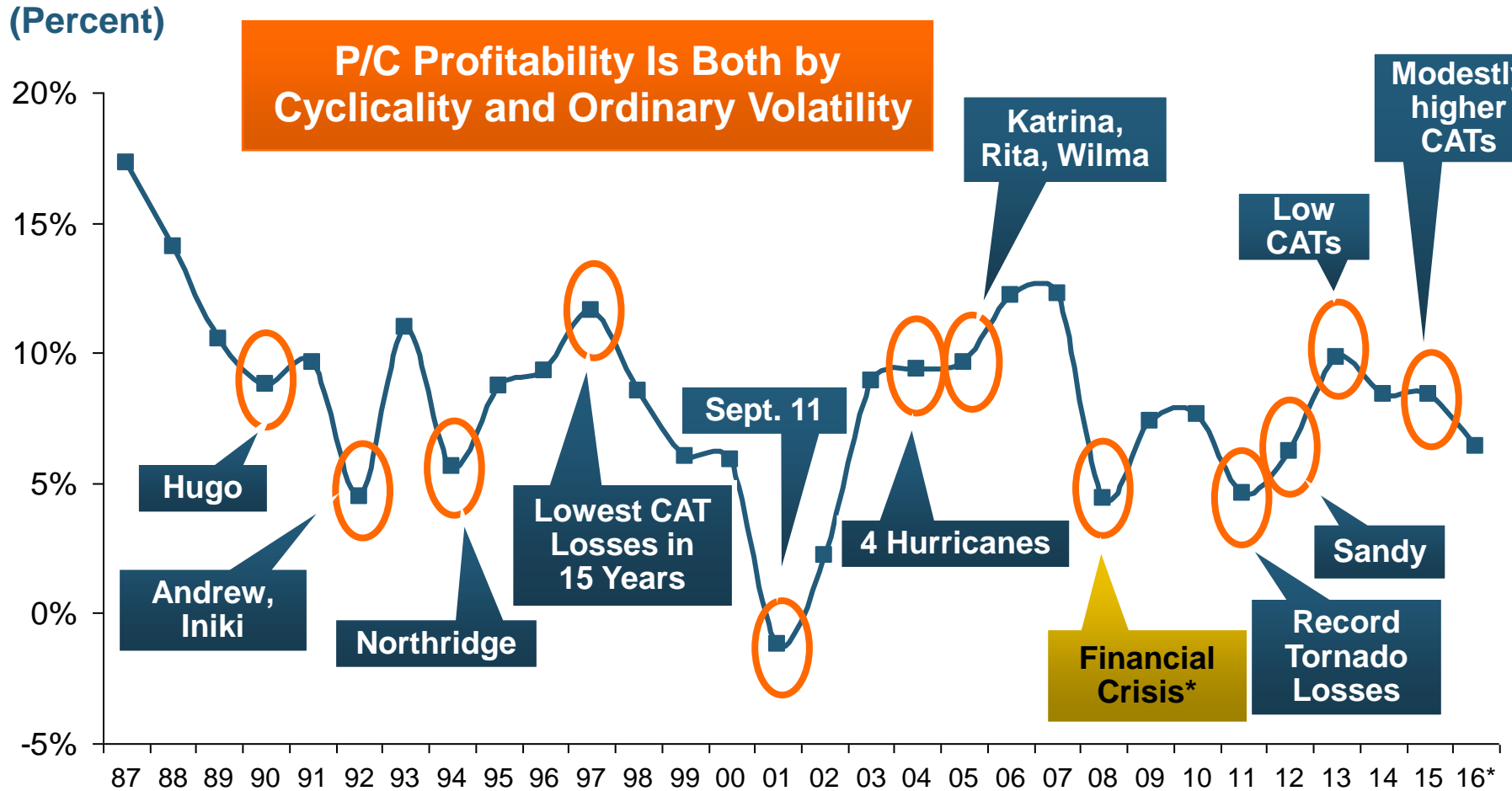
Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2016:H1



*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.

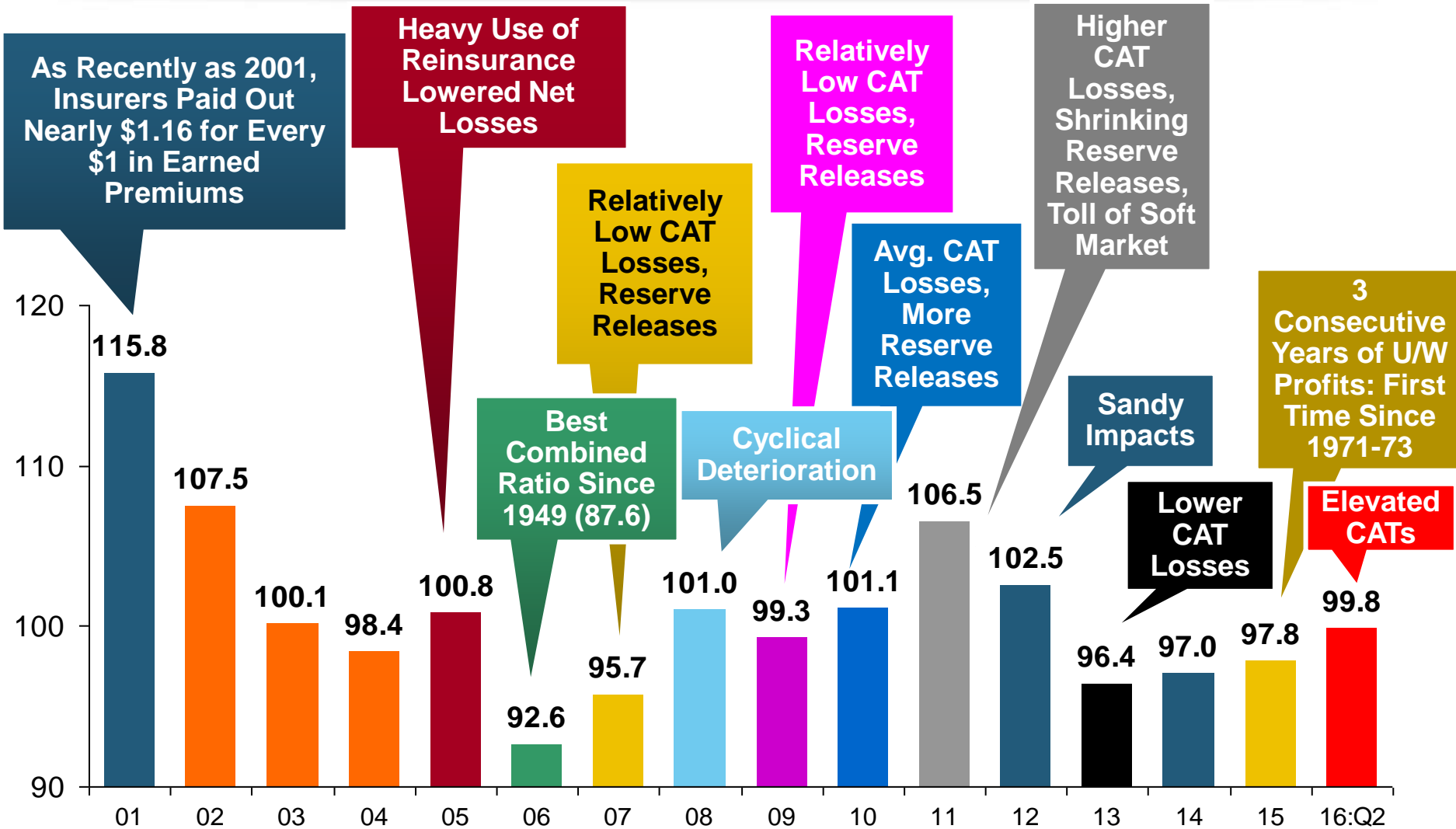
Source: Insurance Information Institute; NAIC, ISO, A.M. Best, Conning

ROE: Property/Casualty Insurance by Major Event, 1987–2016:H1



* Through 2016:H1. Excludes Mortgage & Financial Guarantee in 2008 – 2014.
Sources: ISO, *Fortune*; Insurance Information Institute.

P/C Insurance Industry Combined Ratio, 2001–2016:Q2*

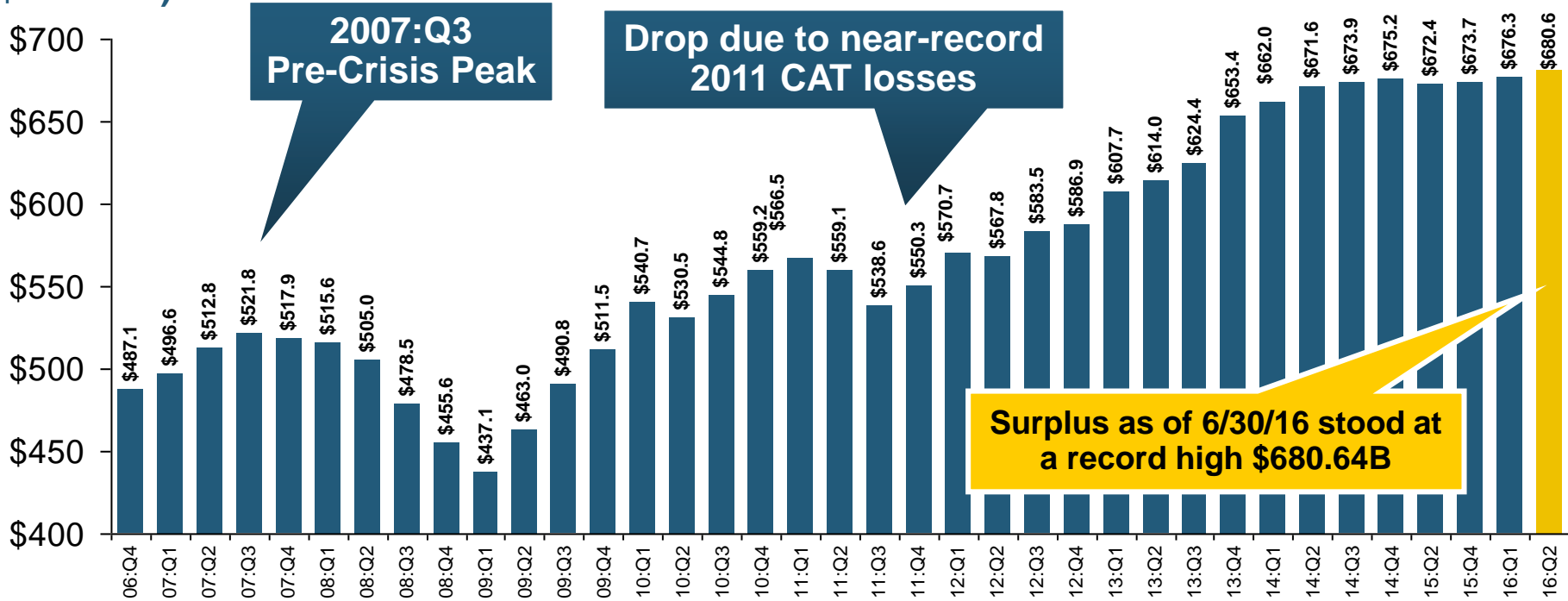


* Excludes Mortgage & Financial Guaranty insurers 2008--2014. Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2; 2013: = 96.1; 2014: = 97.0.

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

Policyholder Surplus, 2006:Q4–2016:Q2

(\$ Billions)



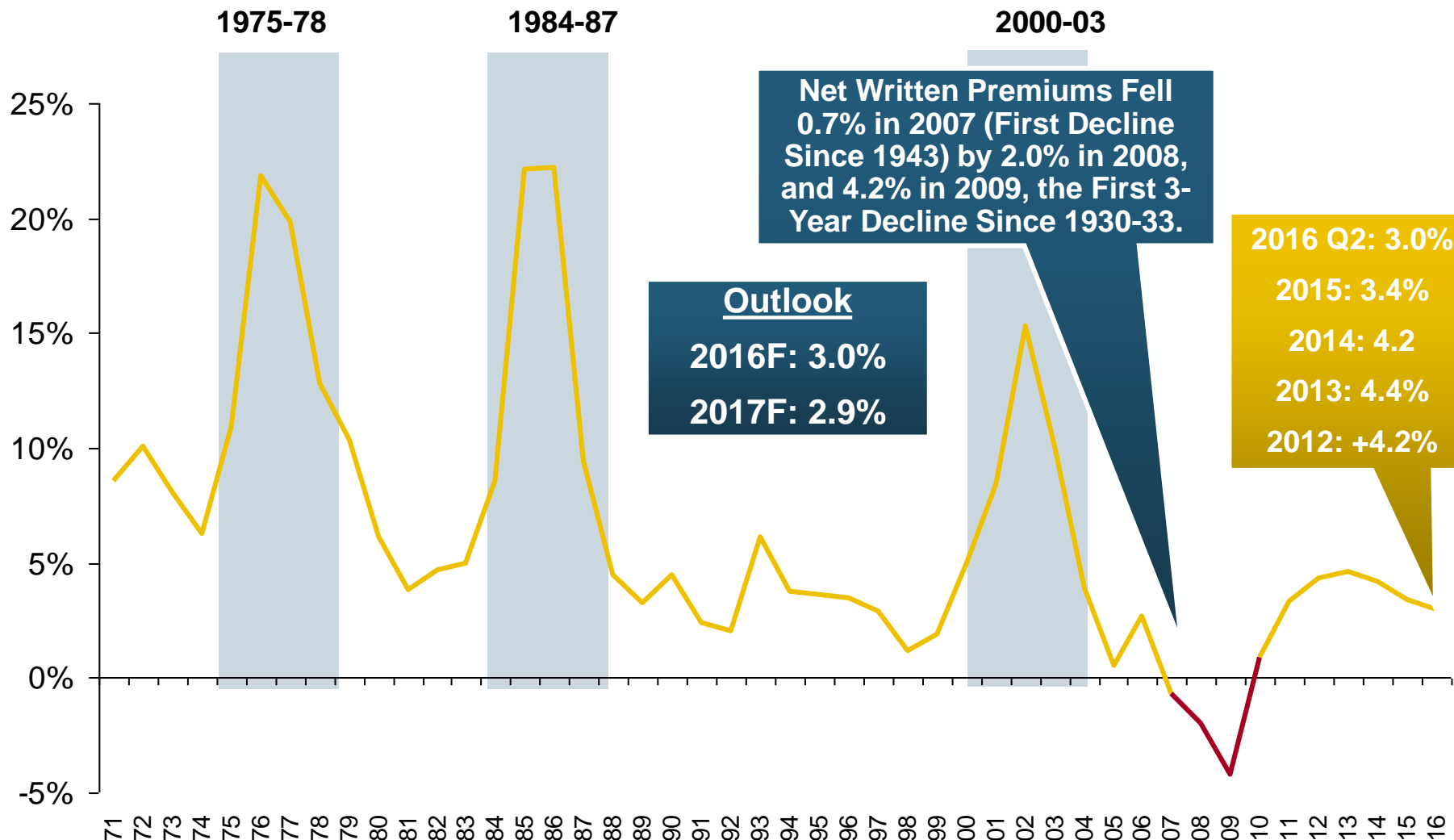
The industry now has \$1 of surplus for every \$0.76 of NPW, close to the strongest claims-paying status in its history.

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 2016 in very strong financial condition.

Net Premium Growth (All P/C Lines): Annual Change, 1971—2016:Q2

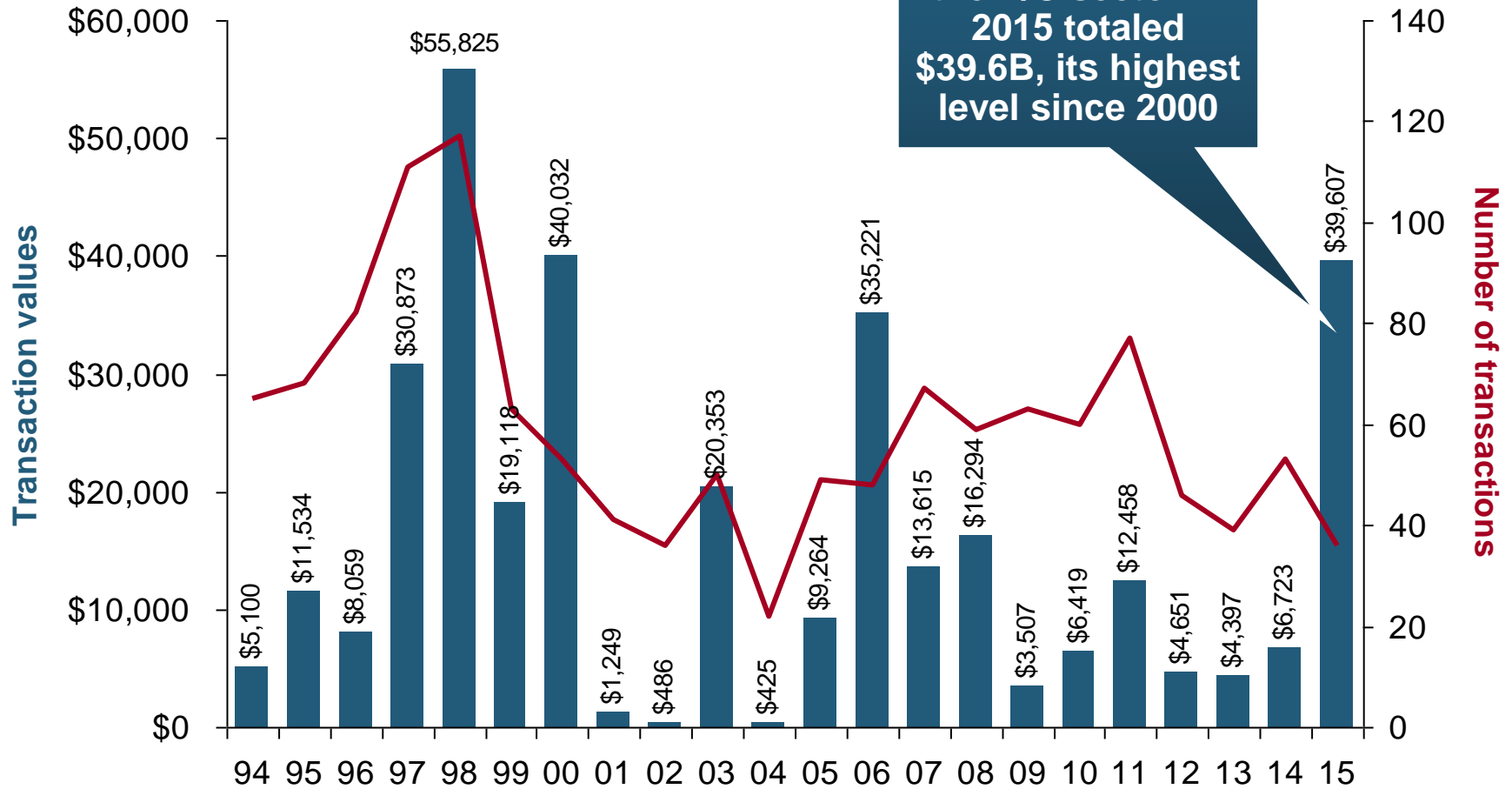
(Percent)



Shaded areas denote "hard market" periods
Sources: A.M. Best (1971-2013), ISO (2014-16).

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

(\$ Millions)



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

Source: Conning proprietary database.

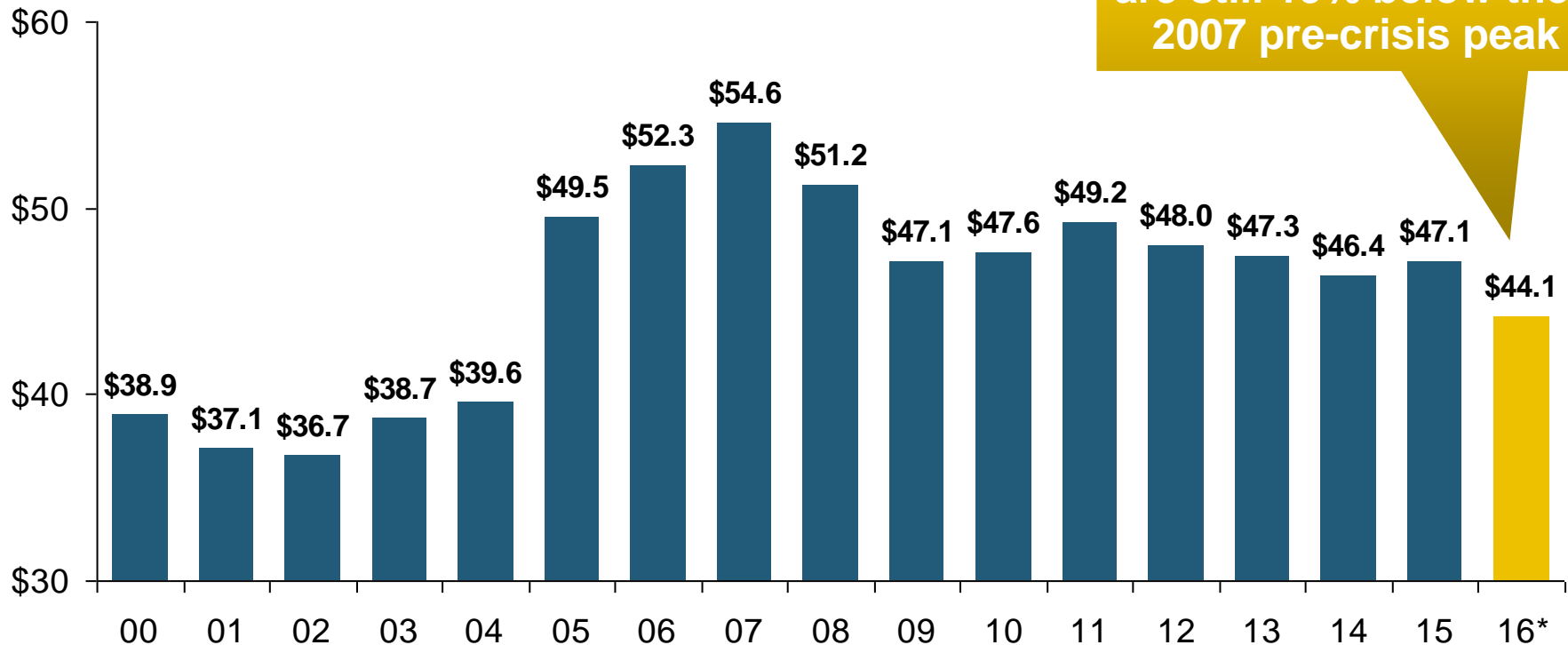
INVESTMENTS: THE NEW REALITY

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

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

Property/Casualty Insurance Industry Investment Income: 2000–2016:Q2¹

(\$ Billions)

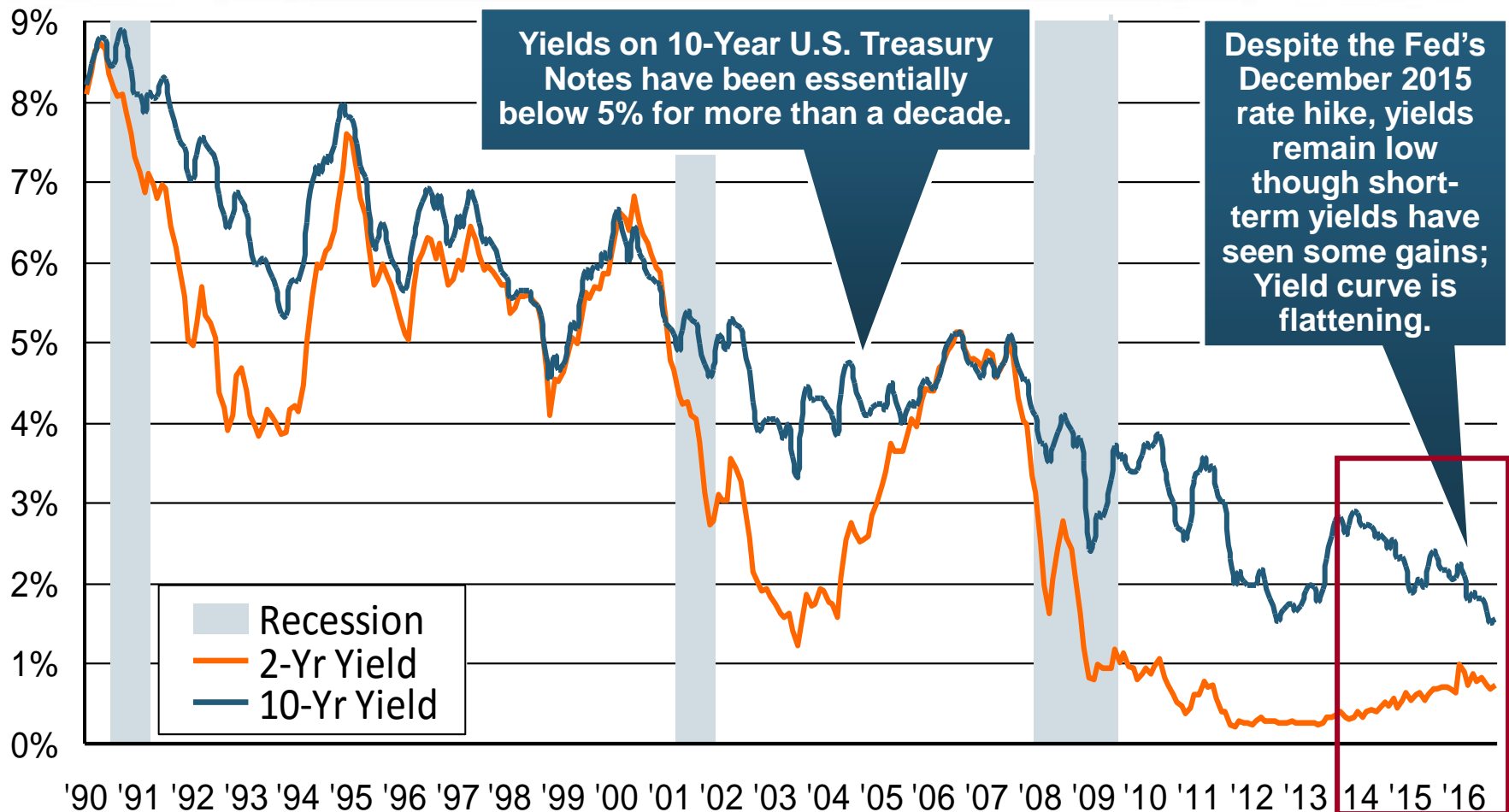


Due to persistently low interest rates, investment income fell in 2012, 2013 and 2014 but showed a small (1.9%) increase in 2015—another drop in 2016 seems likely.

*Annualized figure based on actual Q2:2016 net investment income earned of \$22.067B.

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*



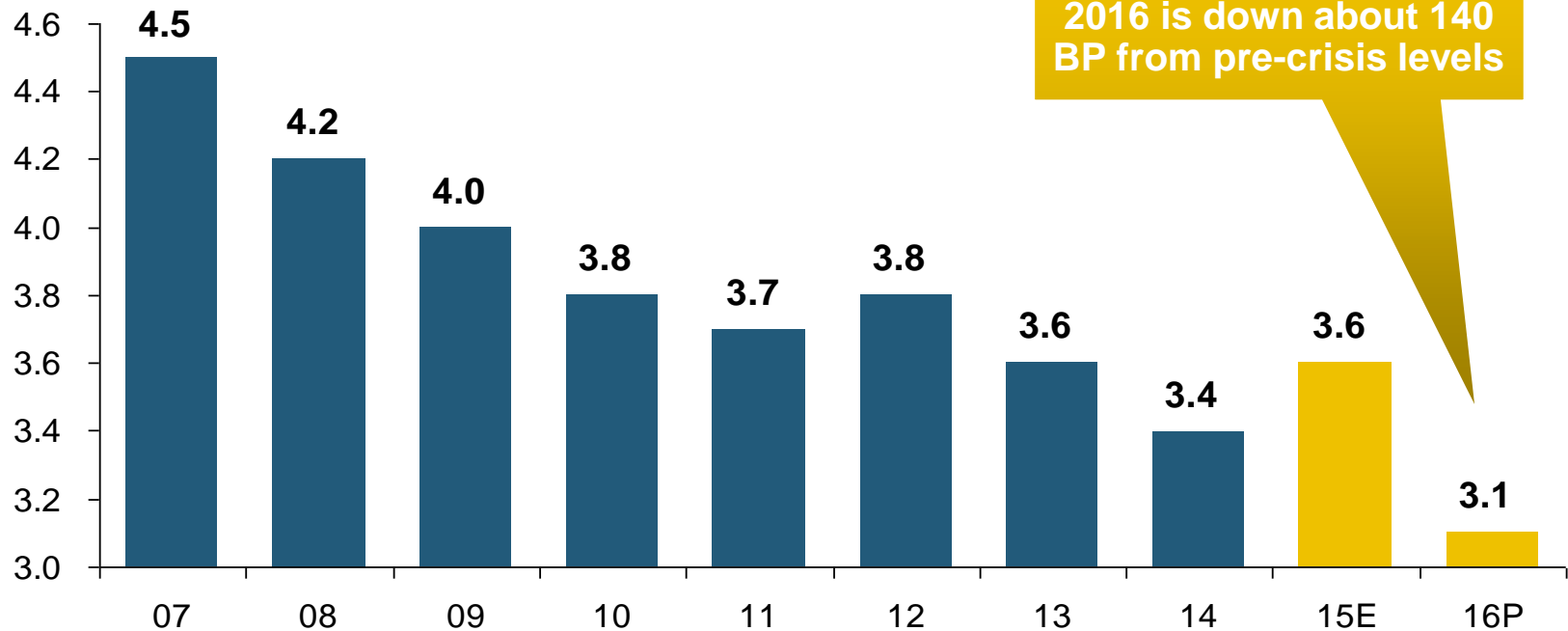
Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, most P/C insurer portfolios will have low-yielding bonds for years to come.

*Monthly, constant maturity, nominal rates, through August 2016.

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

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

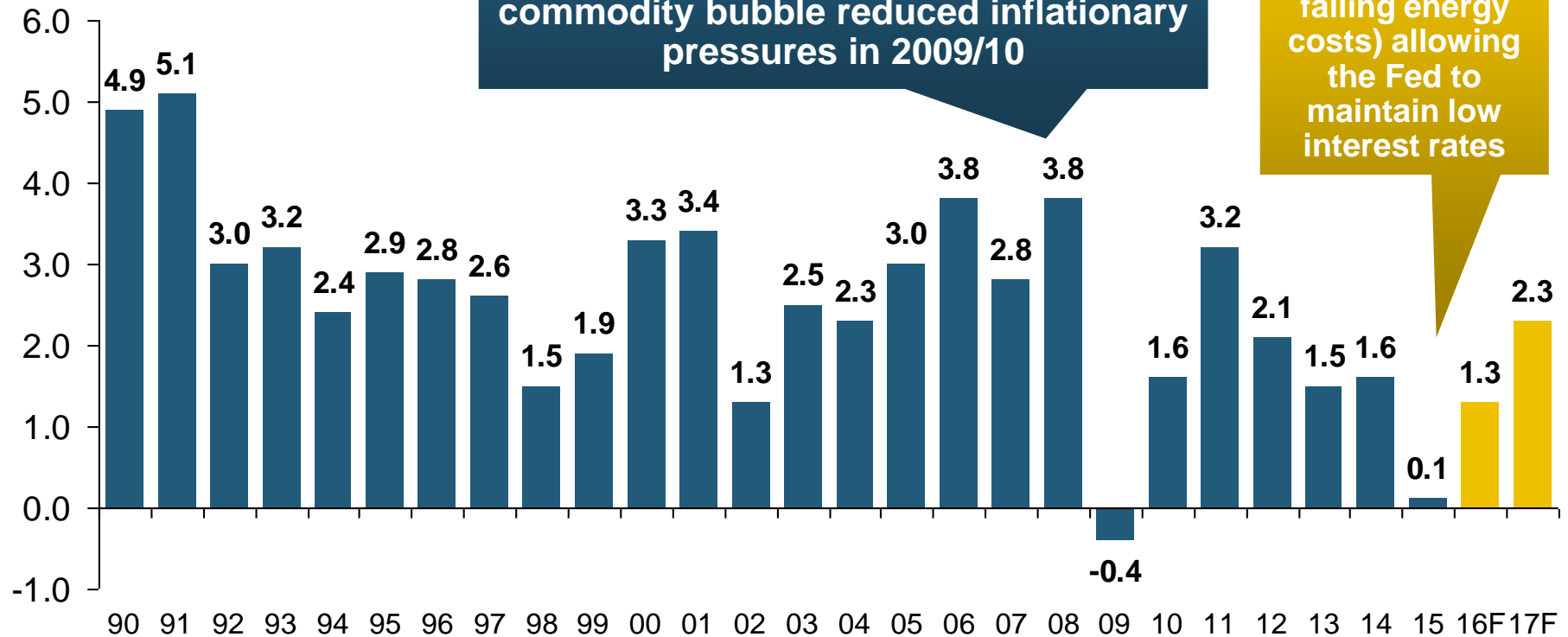
(Percent)



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.

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

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, 10/16 (forecasts).

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



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

*Based on 2008 Invested Assets and Earned Premiums

**US domestic reinsurance only

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



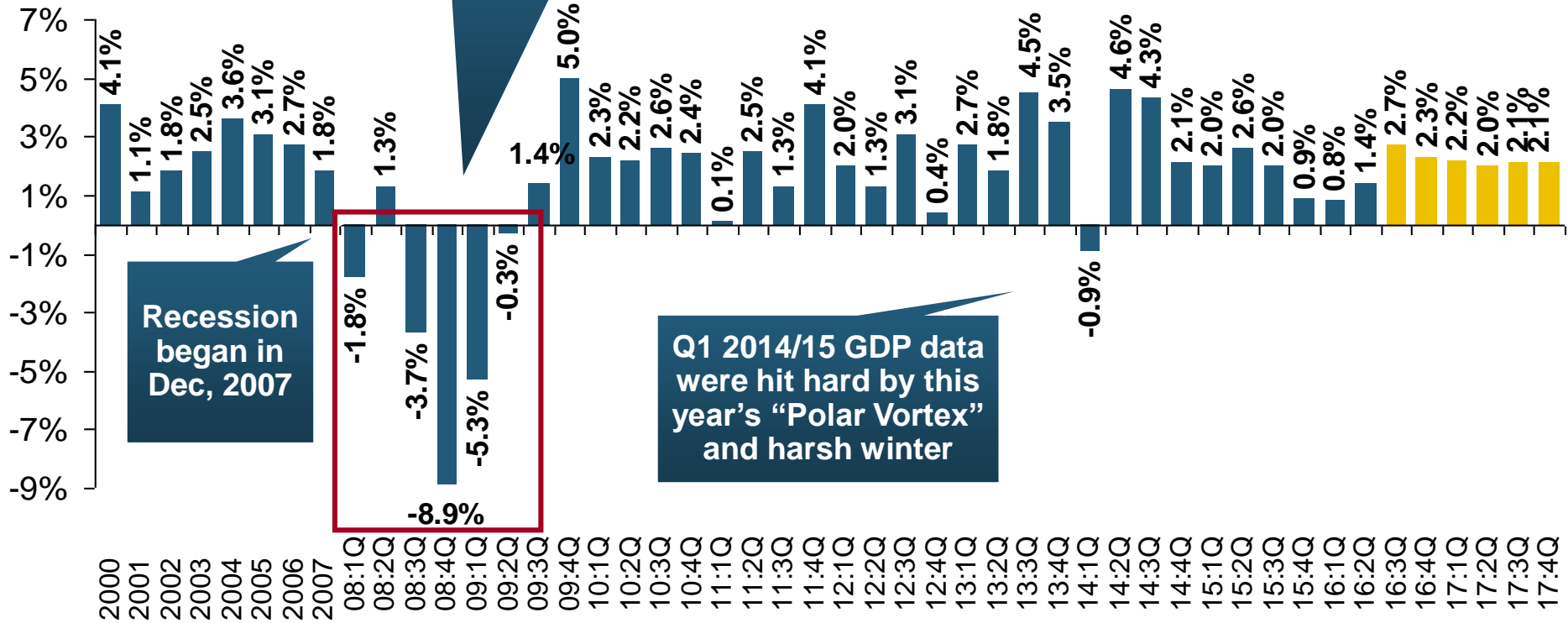
THE ECONOMY

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

US Real GDP Growth*

Real GDP Growth (%)

The Q4:2008 decline was the steepest since the Q1:1982 drop of 6.8%



Recession began in Dec, 2007

Q1 2014/15 GDP data were hit hard by this year's "Polar Vortex" and harsh winter

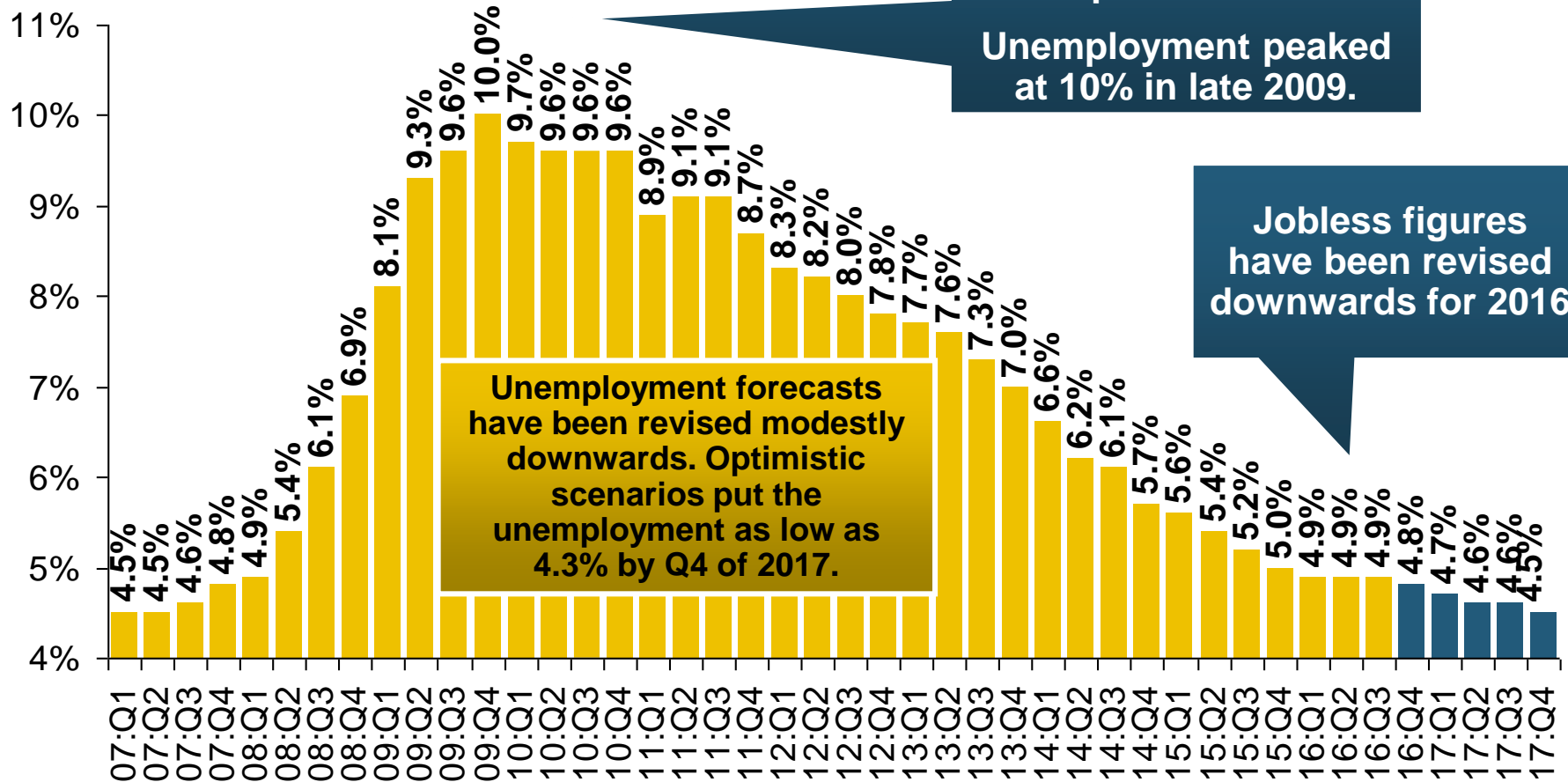
Demand for Insurance Should Increase in 2016 as GDP Growth Continues at a Steady, Albeit Moderate Pace and Gradually Benefits the Economy Broadly

* Estimates/Forecasts from Blue Chip Economic Indicators.

Source: US Department of Commerce, Blue Economic Indicators 10/16; Insurance Information Institute.

US Unemployment Rate Forecast

2007:Q1 to 2017:Q4F*



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

Jobless figures have been revised downwards for 2016

Unemployment forecasts have been revised modestly downwards. Optimistic scenarios put the unemployment as low as 4.3% by Q4 of 2017.

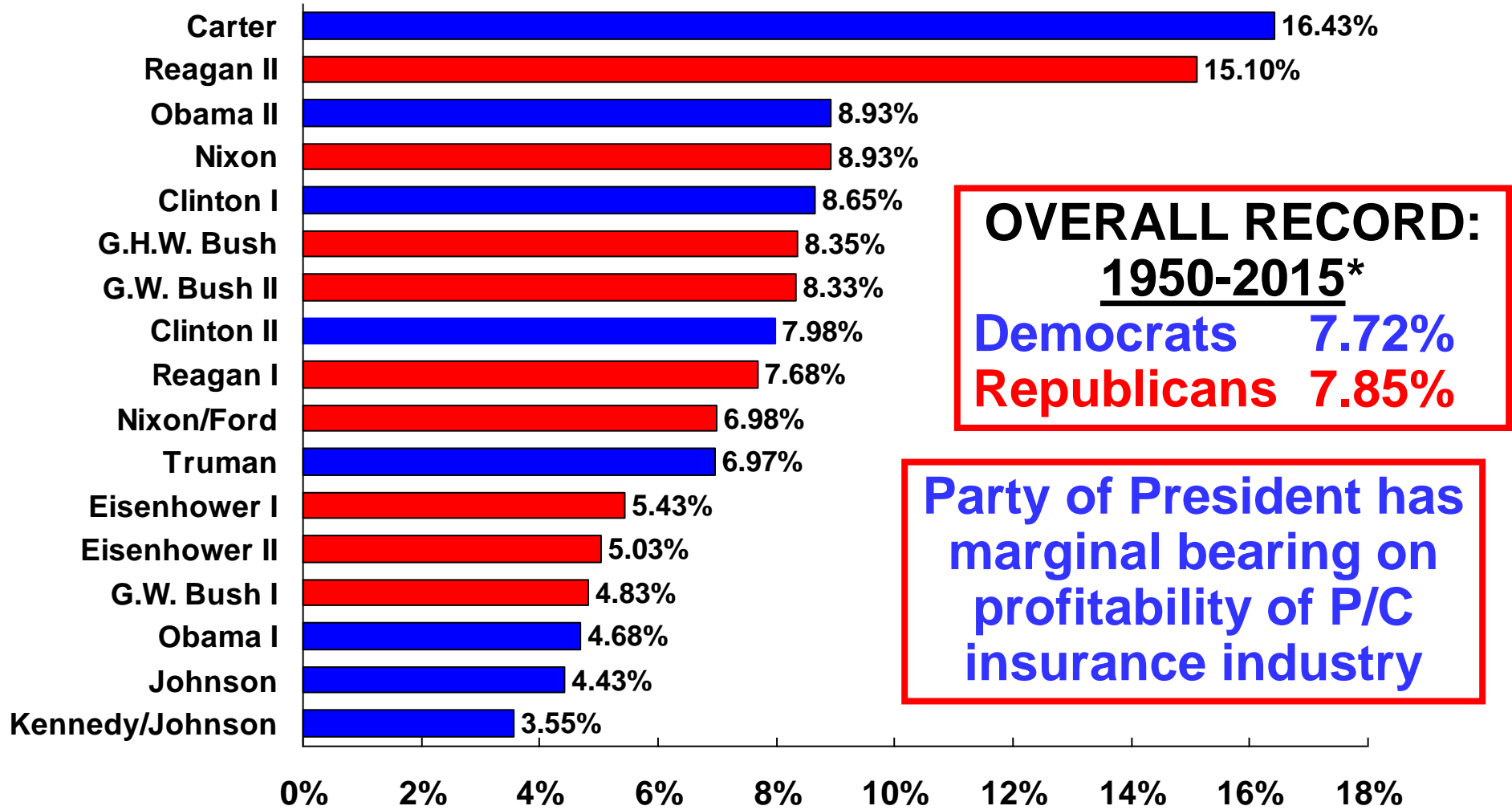
* = actual; = forecasts

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (10/16 edition); Insurance Information Institute.

Profitability & Politics

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

P/C Insurance Industry ROE by Presidential Administration, 1950-2015*



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

Auto & Home Insurance: State of the Personal Lines Market

**Auto Frequency and Severity Are an
Immediate Challenge**

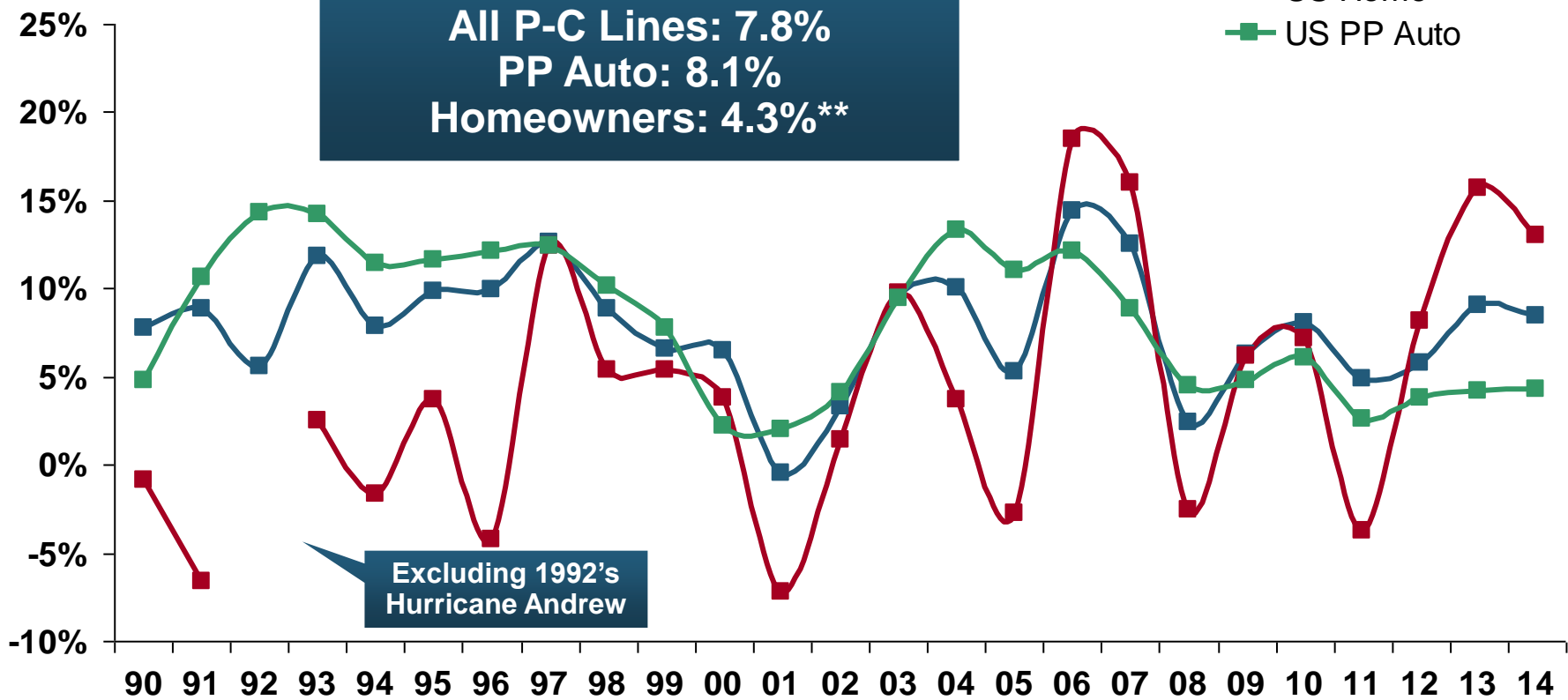
***Dearth of Major CATs (Until Recently),
Pricing Discipline Has Helped Home***

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

(Percent)

Average RNW: 1990-2013*
 All P-C Lines: 7.8%
 PP Auto: 8.1%
 Homeowners: 4.3%**

- US All Lines
- US Home
- US PP Auto



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

*Latest available.

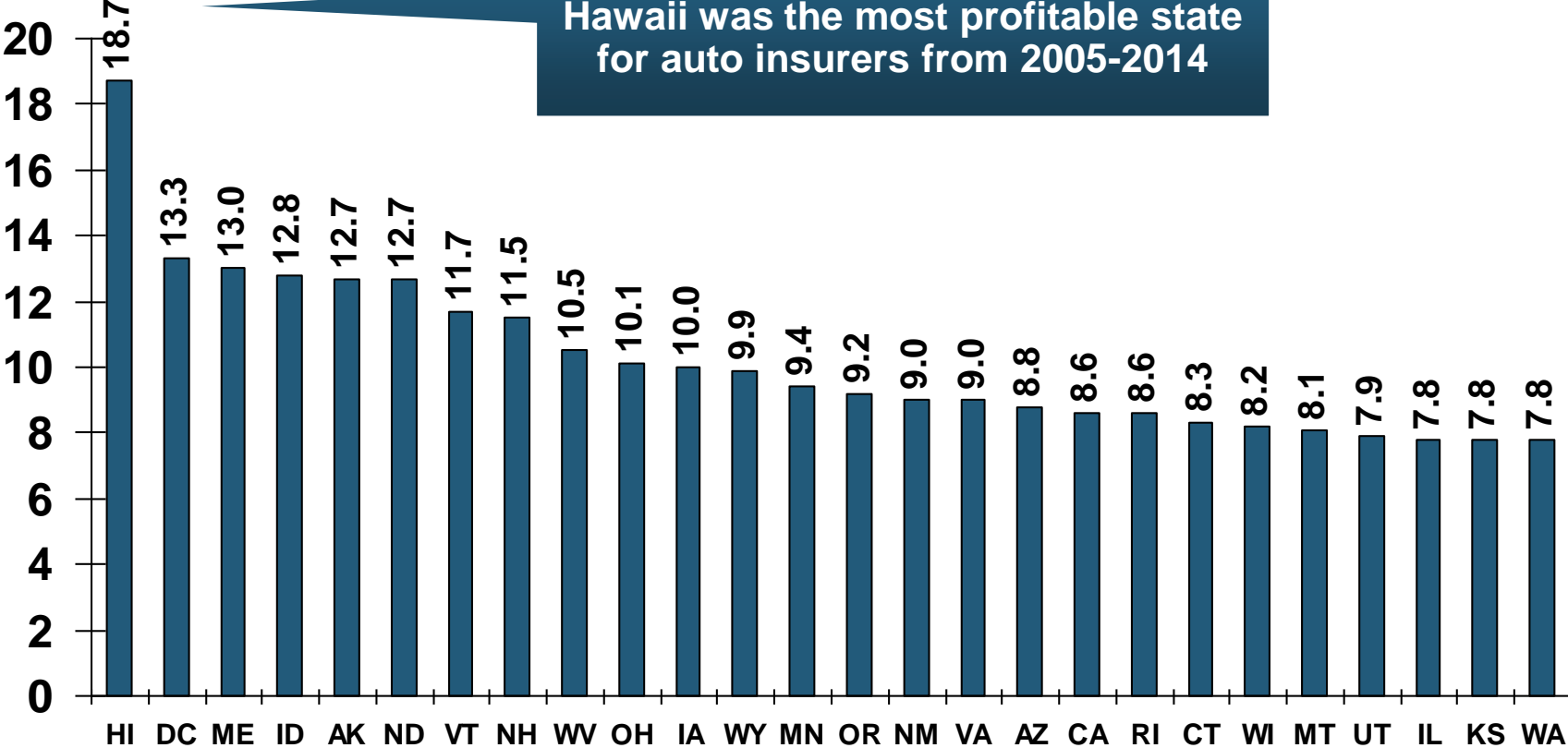
**Excludes 1992, the year of Hurricane Andrew. If 1992 is included the resulting homeowners RNW is 1.9%

Sources: NAIC; Insurance Information Institute.

RNW Pvt. Passenger Auto, 2005-2014

Average: Highest 25 States

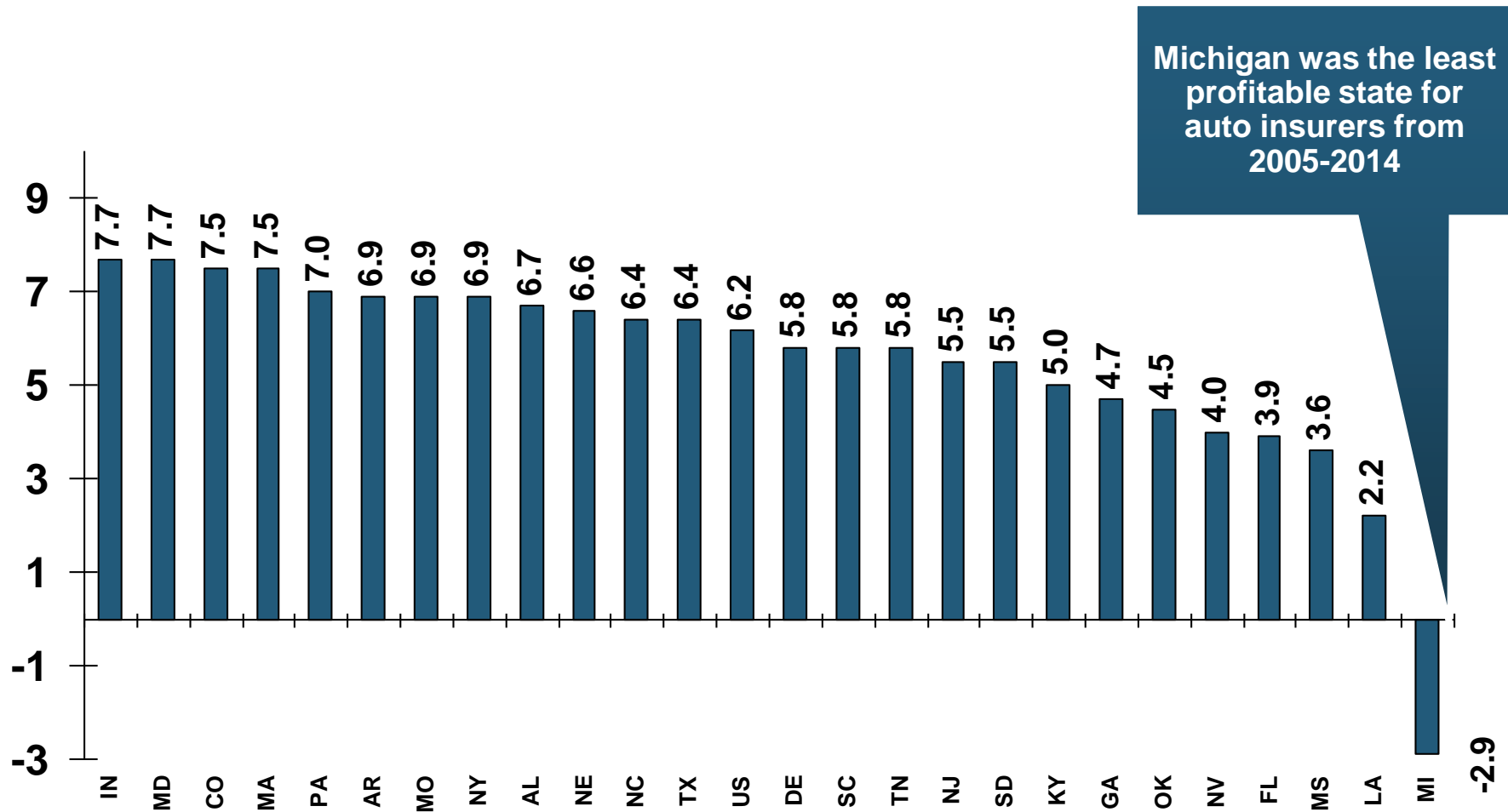
(Percent)



Sources: NAIC; Insurance Information Institute

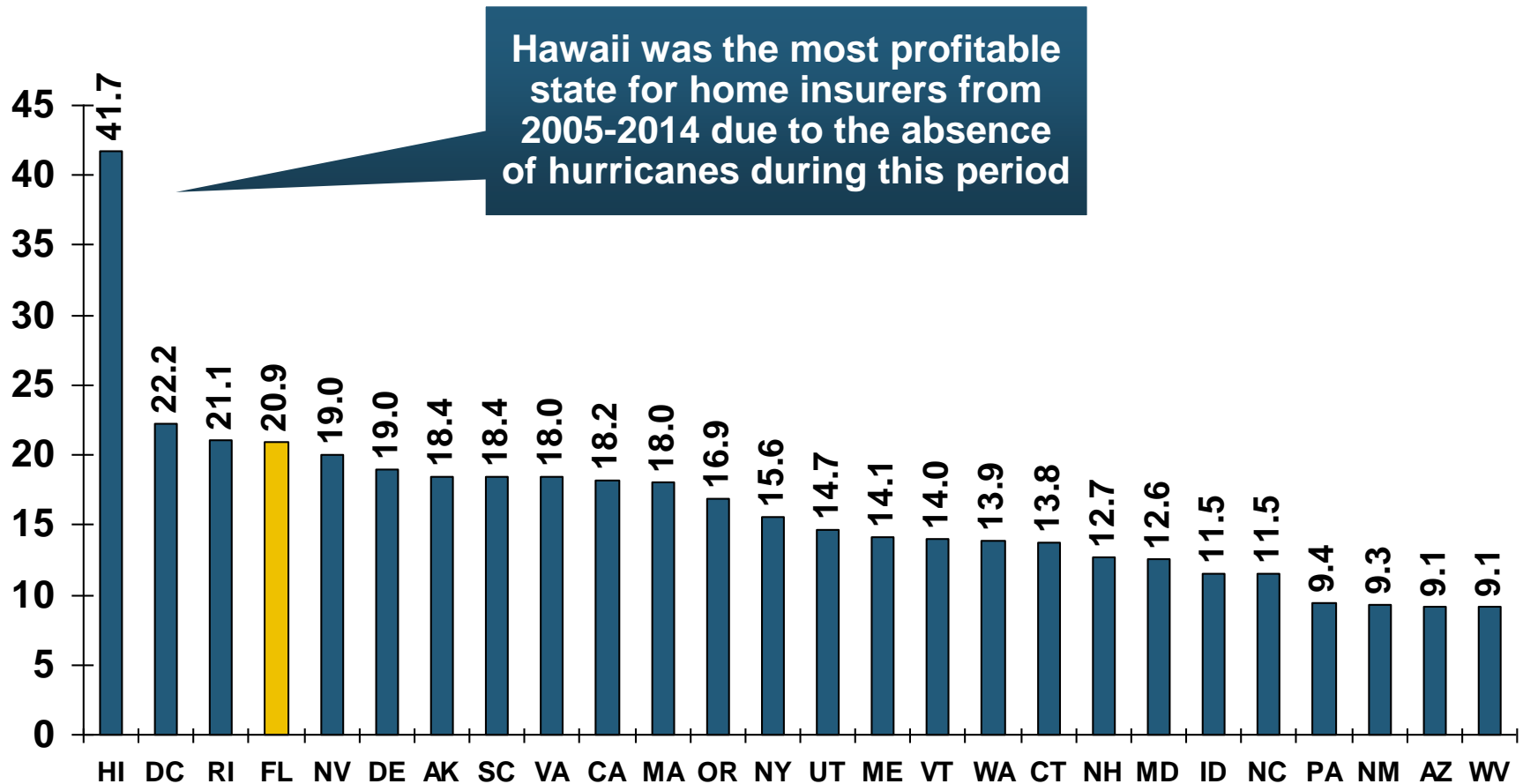
RNW Pvt. Passenger Auto, 2005-2014 Average: Lowest 25 States

(Percent)



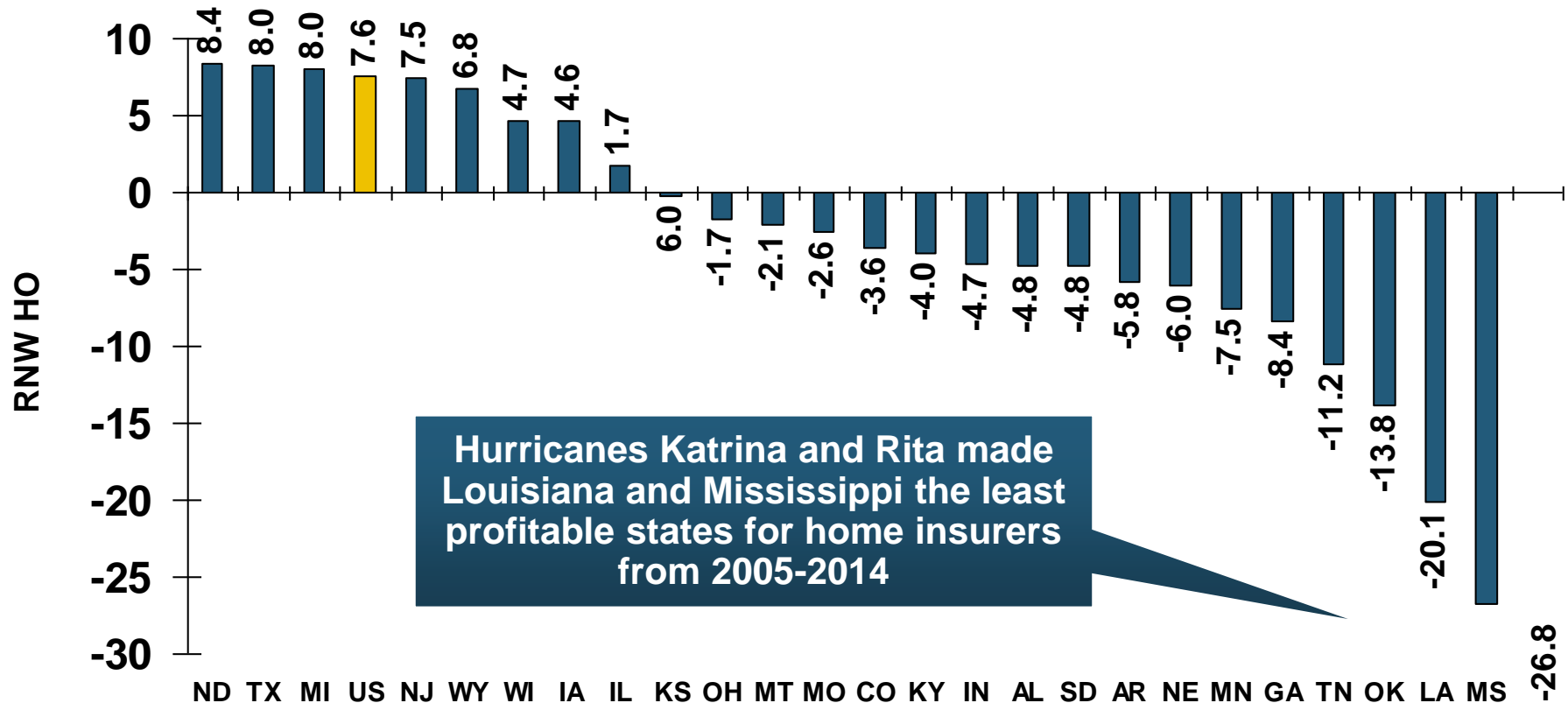
RNW Homeowners Insurance, 2005-2014 Average: Highest 25 States

(Percent)



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

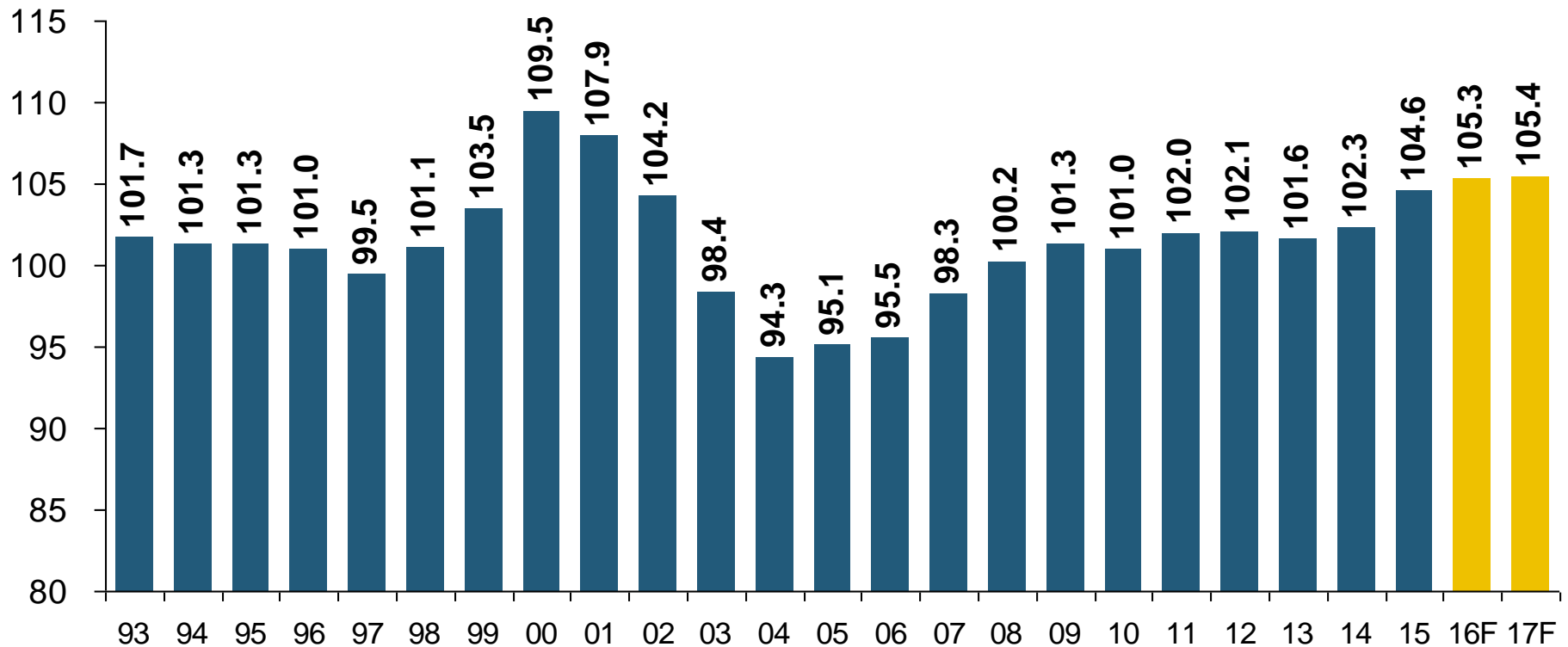
(Percent)



Personal Lines Underwriting Performance

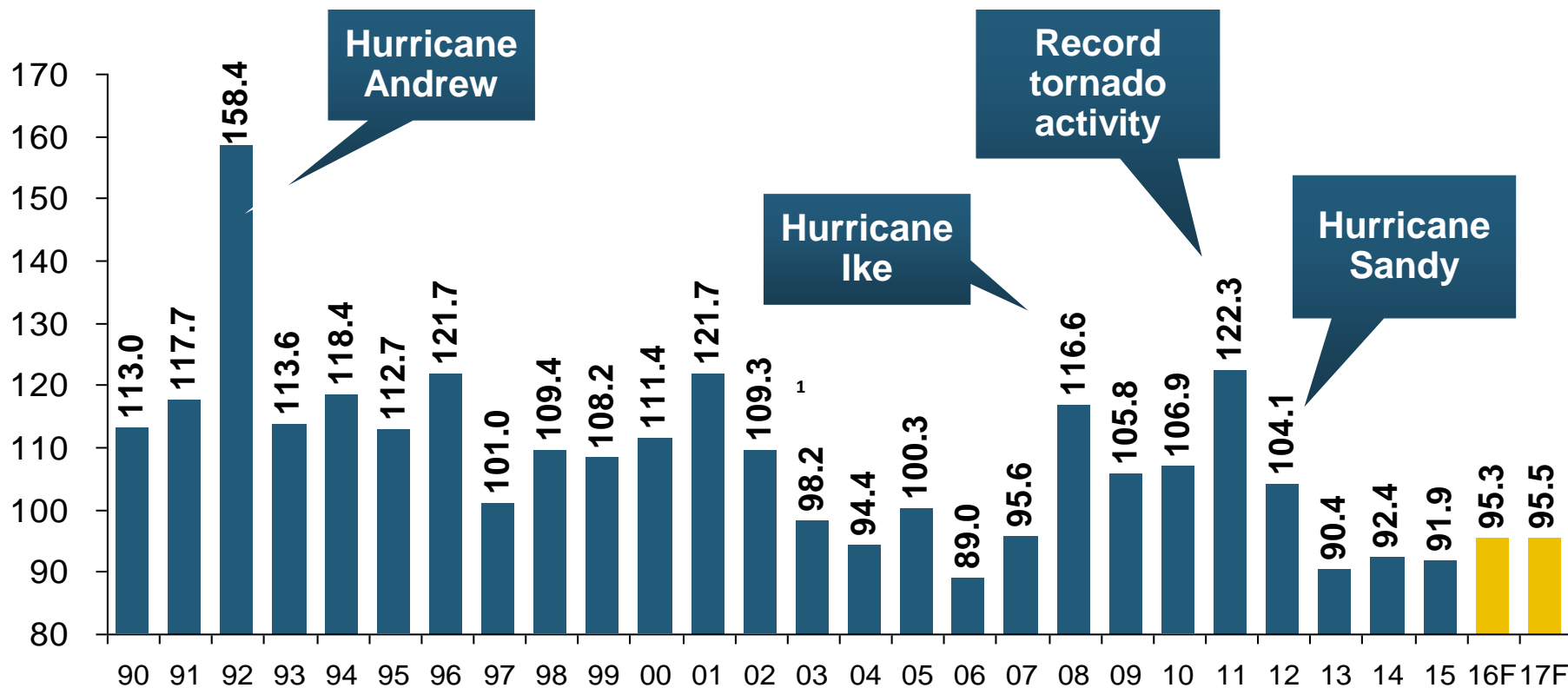
***Auto, Home Underwriting
Performance Exhibit Periods of
Both Stability and Volatility***

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

Homeowners Insurance Combined Ratio: 1990–2017F



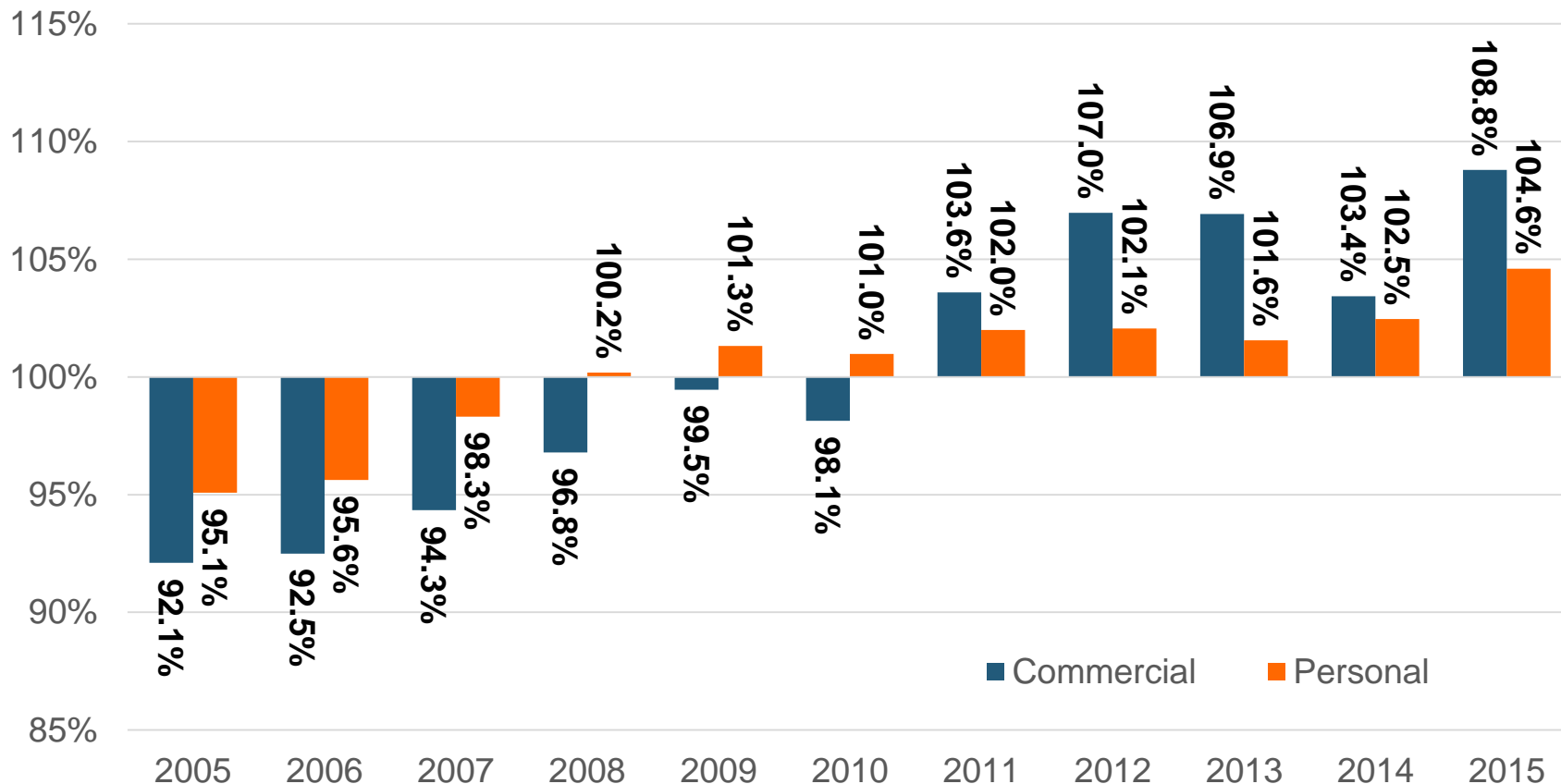
Homeowners Performance Has Improved Markedly Since the 2011/12's Large Cat Losses. Extreme Regional Variation Can Be Expected Due to Local Catastrophe Loss Activity. Results in 2016 Will Be Impacted by Severe Spring Weather

Claim Trends in Private Passenger Auto Insurance

**Rising Frequencies and Severities
in Many Coverages**

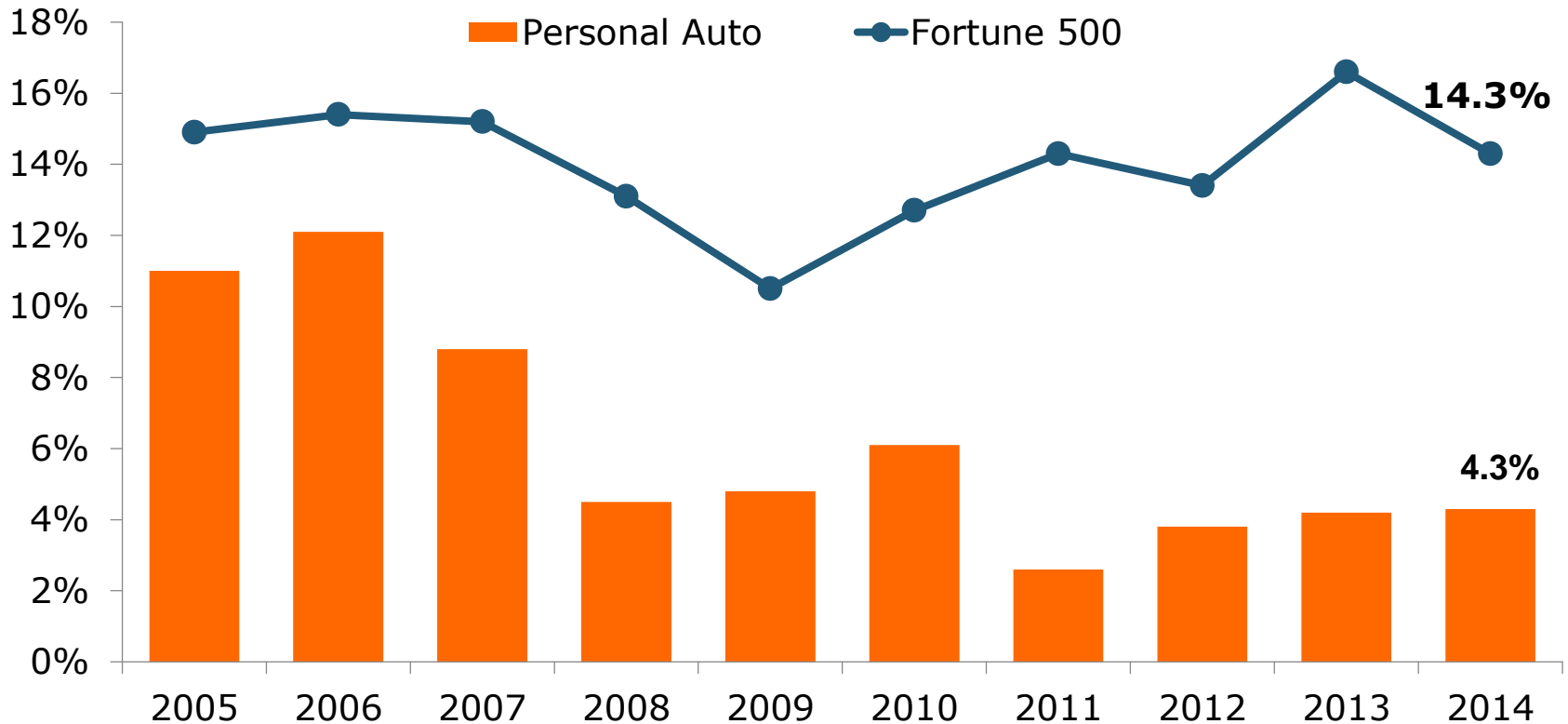
Will that Pattern Be Sustained?

Auto Insurance Net Combined Ratios, Yearly, 2005-2015



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

Return on Net Worth: Personal Auto, 2005–2014

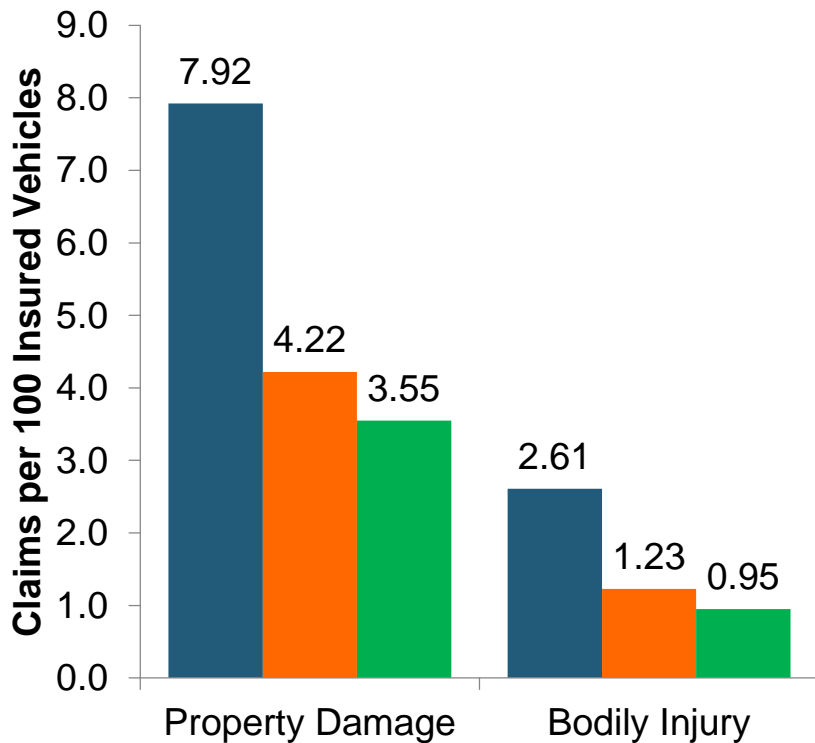


Auto Insurance Profitability Has Been Stuck at Low Levels.

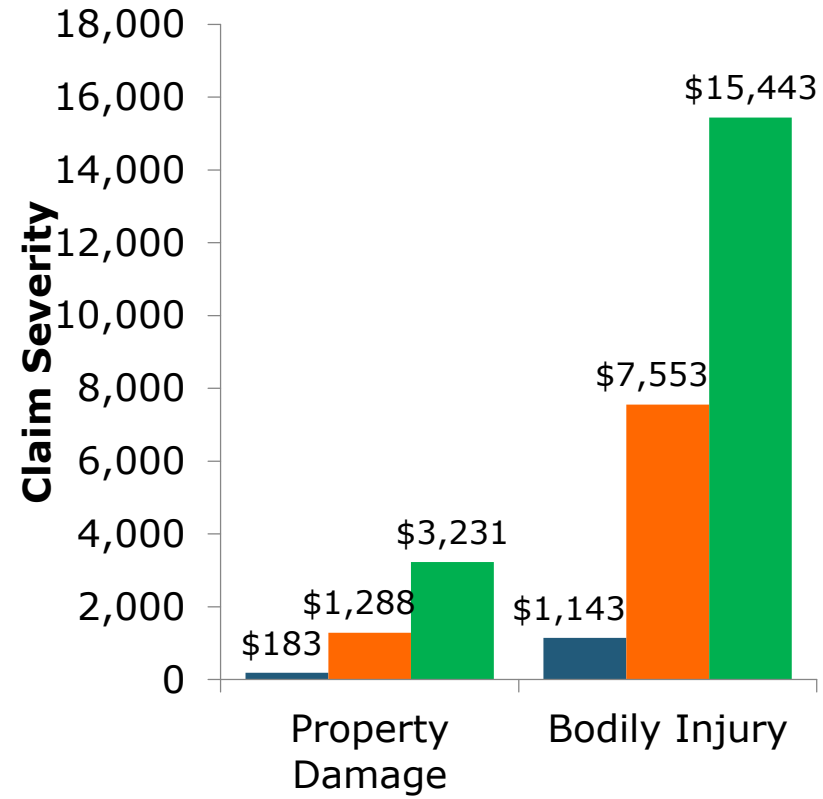
A Half Century of Auto Insurance: Frequency vs. Severity

In the Long Run, Frequency Falls. Severity Increases.

Frequency

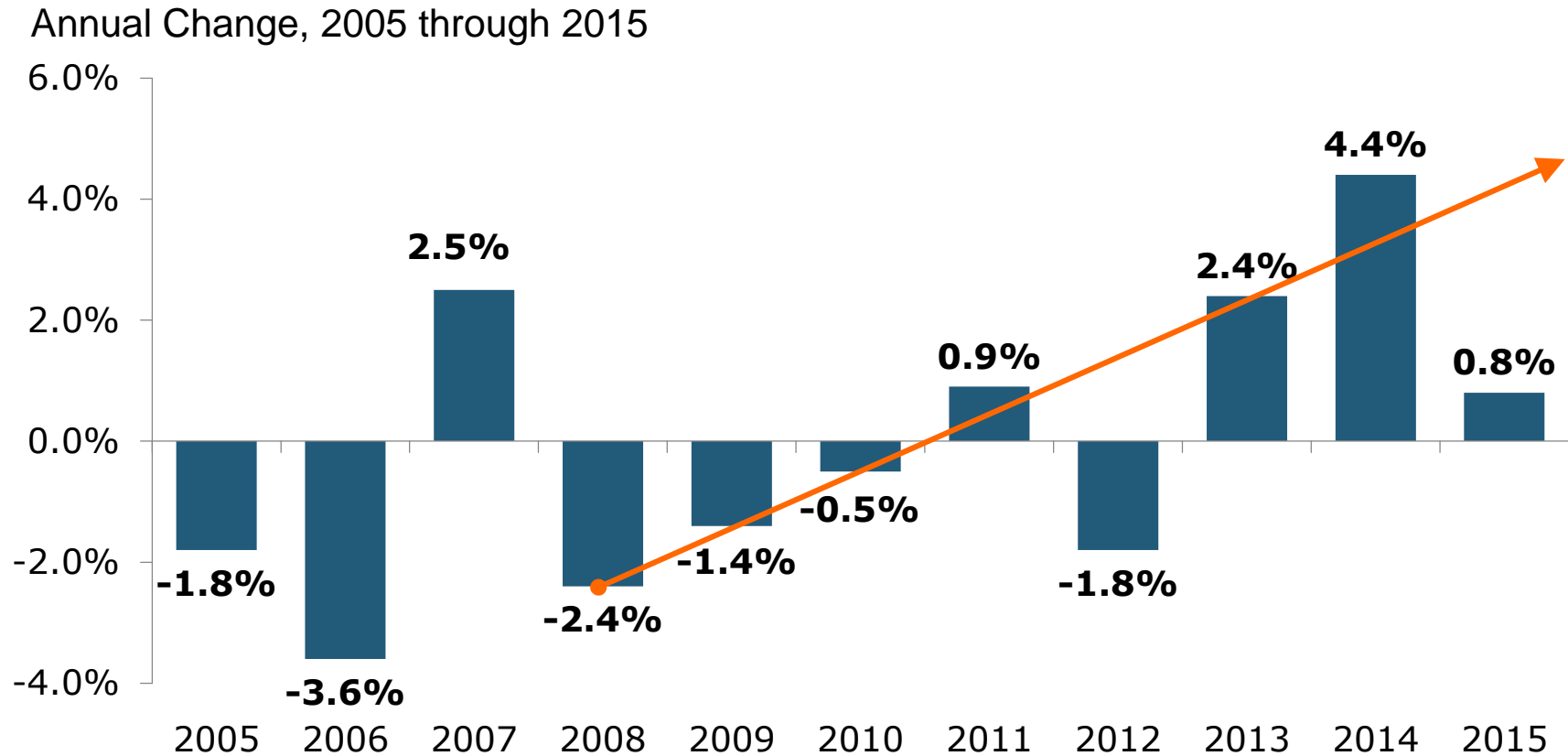


Severity



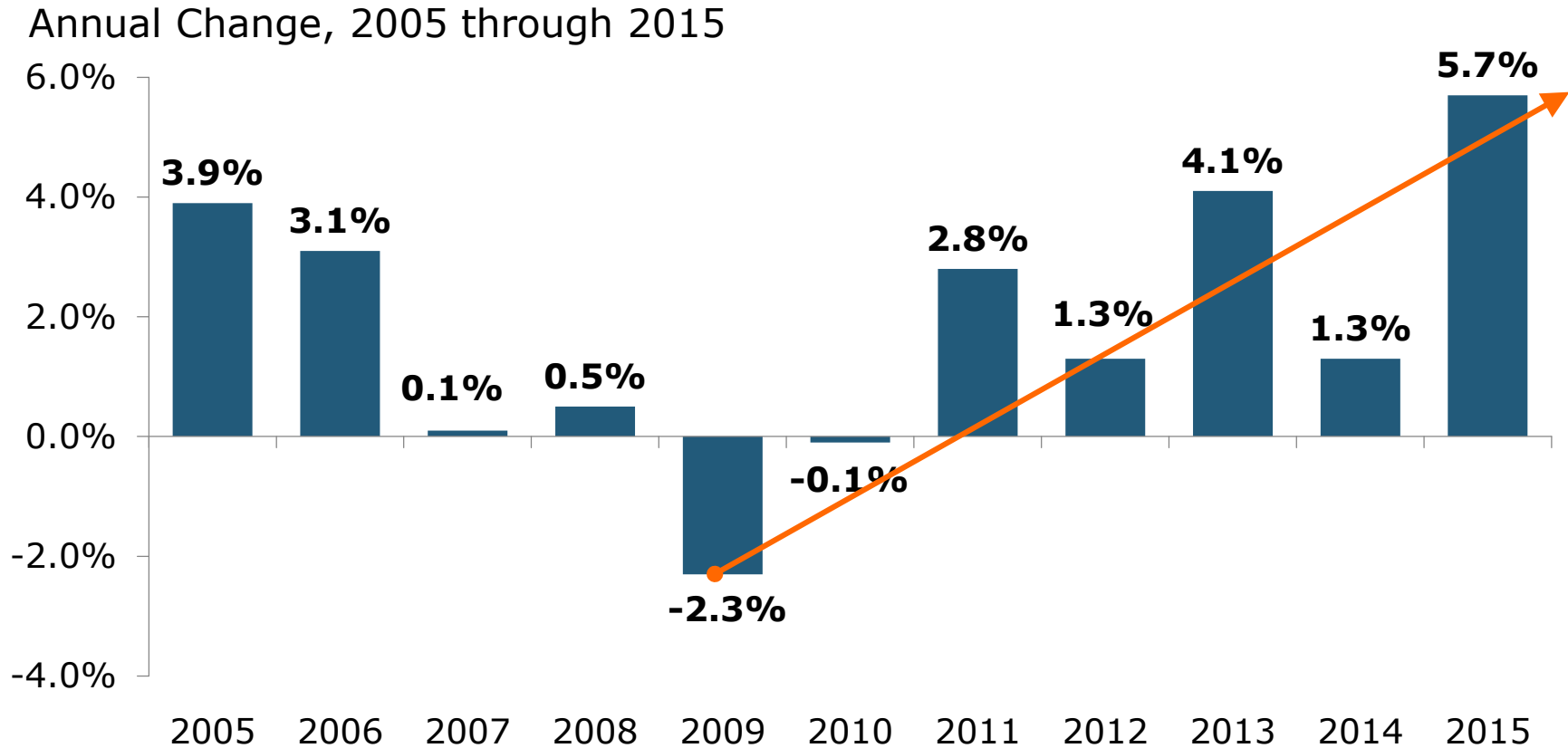
■ 1963 ■ 1988 ■ 2013

Collision Claims: Frequency Trending Higher in 2015



For a Long Time, Claim Frequency Was Falling, But Since 2010 This Trend Seems to Have Reversed.

Collision Claims: Severity Trending Higher in 2009-2015



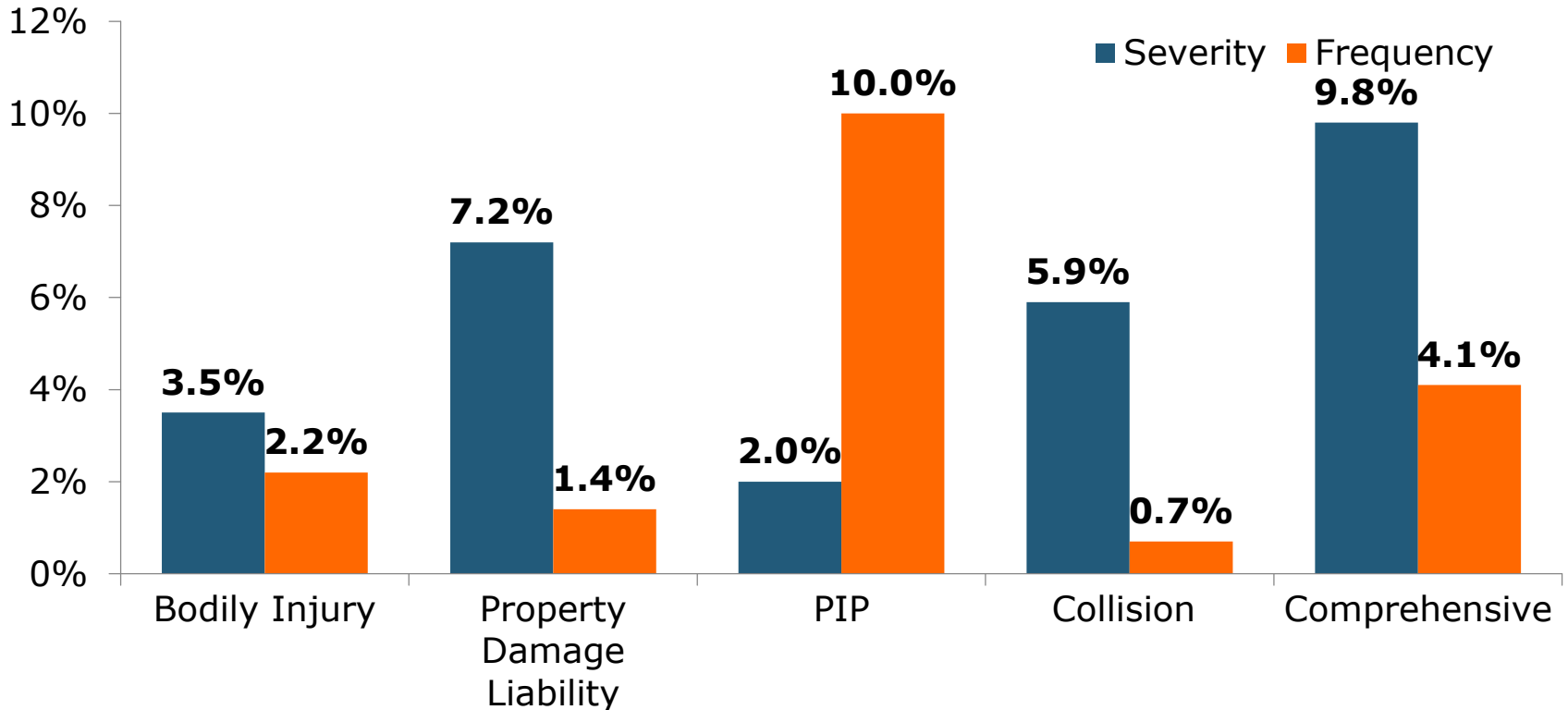
The Great Recession and High Fuel Prices Helped to Temper Claim Severity, But These forces Have Clearly Reversed, Consistent with Experience from Past Recoveries.

Some Comments on Frequency and Severity Trends and Insurance Markets

- Over the long run, falling frequency and rising severity are the norm in auto insurance (personal and commercial)
- The phenomenon of falling frequency and rising severity is not confined to auto lines
- It is almost a “Law of Insurance Physics”
- The same trends have been observed in many lines for decades:
 - ◆ Workers Comp Aviation Marine
 - ◆ Fire Life
- Lines of insurance that do not follow this pattern tend to manifest/suffer from certain economic defects:
 - ◆ Adverse Selection and Moral Hazard (e.g., Health, Flood, some Coastal Property markets, Social Security Disability)
 - ◆ Some of these defects are attributable to subsidies, others to informational asymmetries (less of an issue in auto)

Why Personal Auto Loss Ratios are Rising: Severity & Frequency by Coverage, 2016* vs. 2015

Annual Change, 2016*
Over 2015



Frequency and Severity Rose Are Rising Across All Personal Coverage Types in 2016

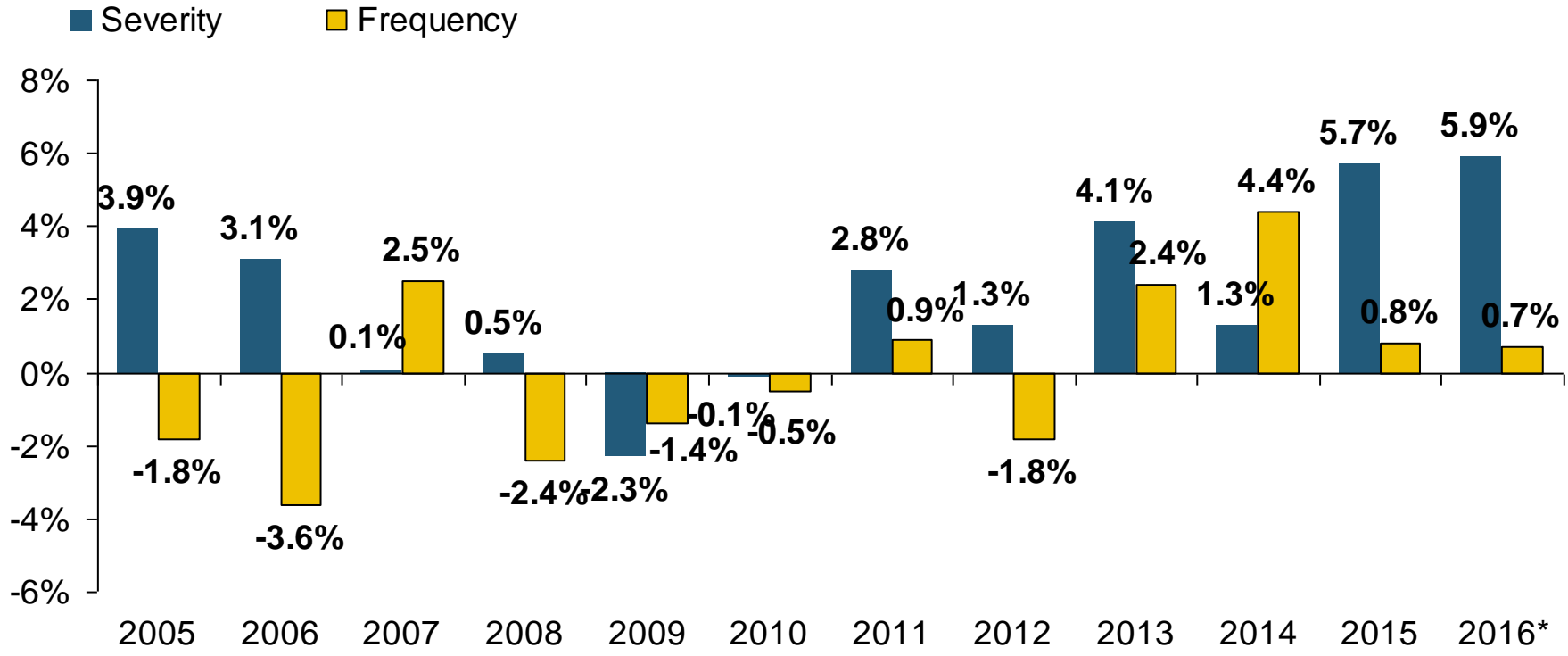
*Data are for the 4 quarters ending in 2016:Q2.

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

Collision Coverage: Severity & Frequency Trends Are Both Higher in 2016



Annual Change, 2005 through 2016*



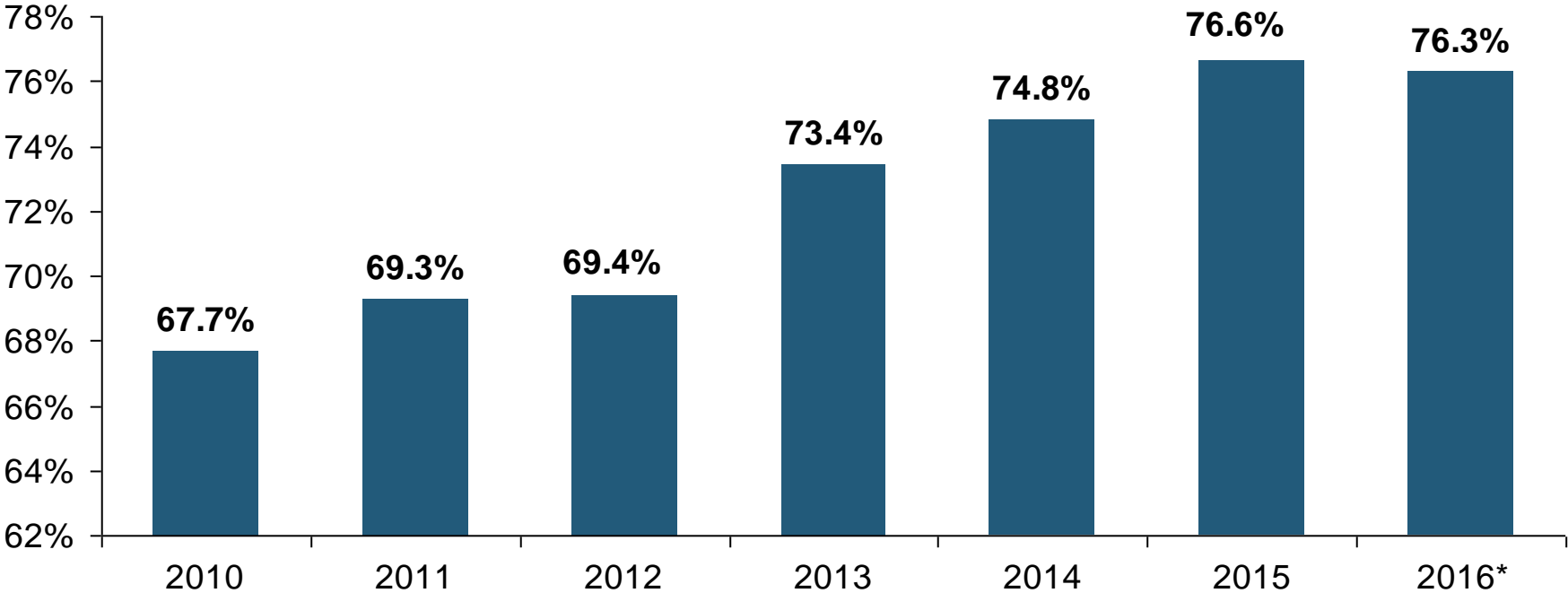
The Recession, High Fuel Prices Helped Temper Frequency and Severity, But this Trend Has Clearly Reversed, Consistent with Experience from Past Recoveries

*Four quarters ending with 2016 Q2.

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

Collision Loss Ratio Trending Upward: Private Passenger Auto, 2010 – 2016*

Loss Ratio

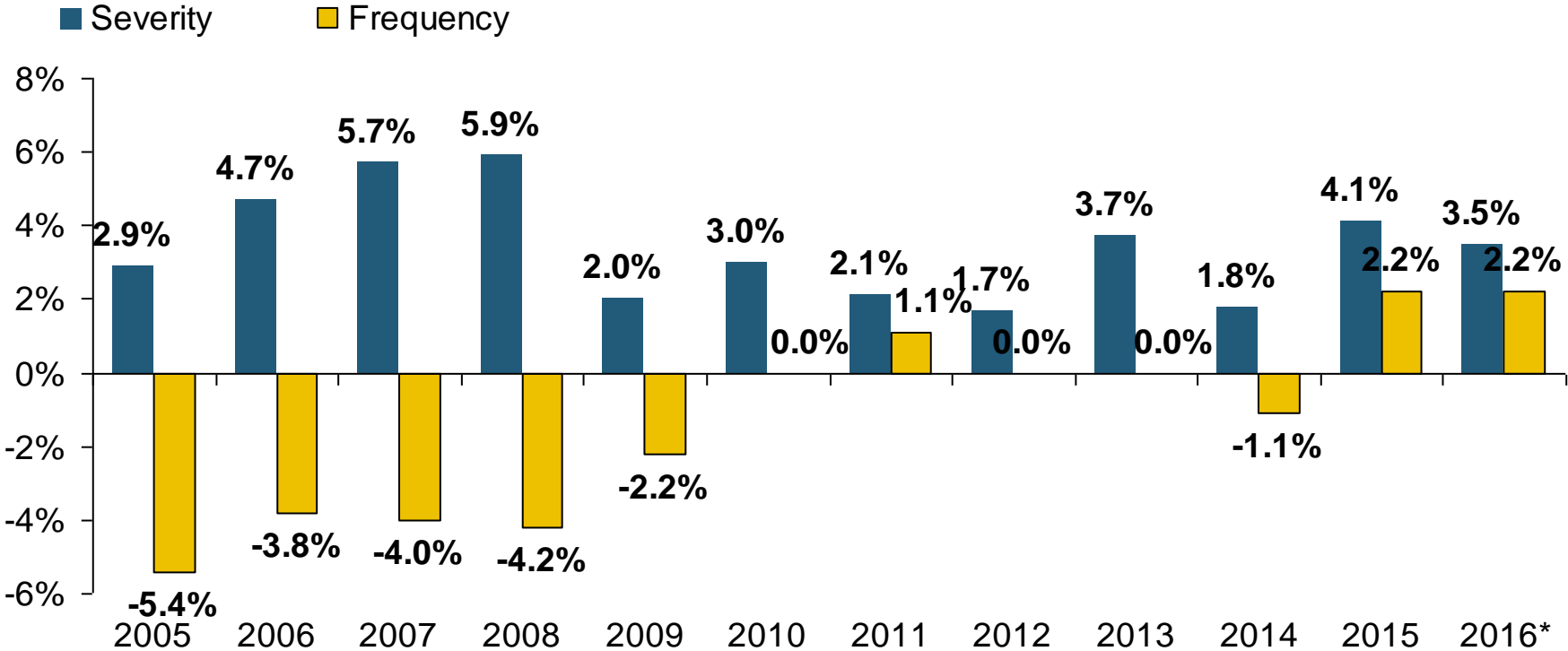


Collision Loss Ratios are Trending Steadily Upward

*2016 figure is for the 4 quarters ending in 2016:Q2.
Source: ISO/PCI *Fast Track* data; Insurance Information Institute

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

Annual Change, 2005 through 2016*

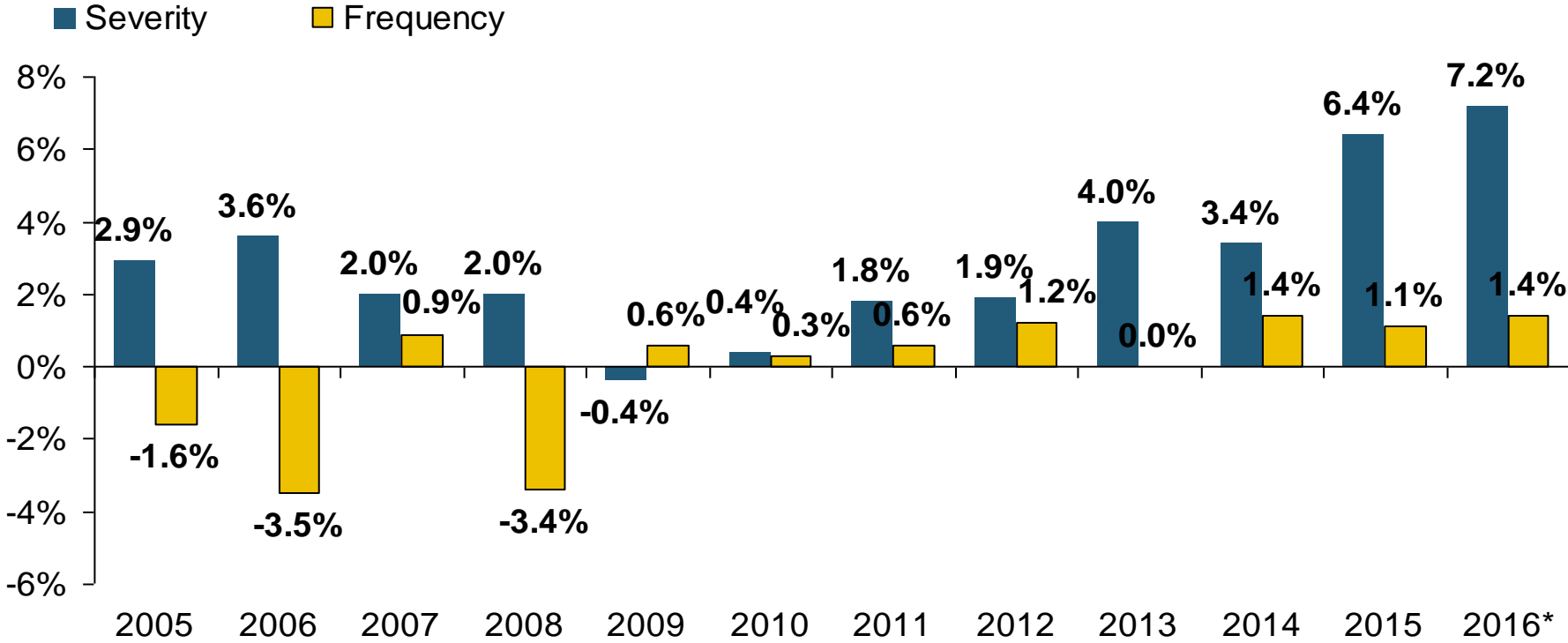


Cost Pressures Will Increase if BI Frequency and Severity Trends Persist

*2016 figure is for the 4 quarters ending 2016:Q2.
 Source: ISO/PCI *Fast Track* data; Insurance Information Institute

Property Damage Liability: Severity and Frequency Are Up

Annual Change, 2005 through 2016*



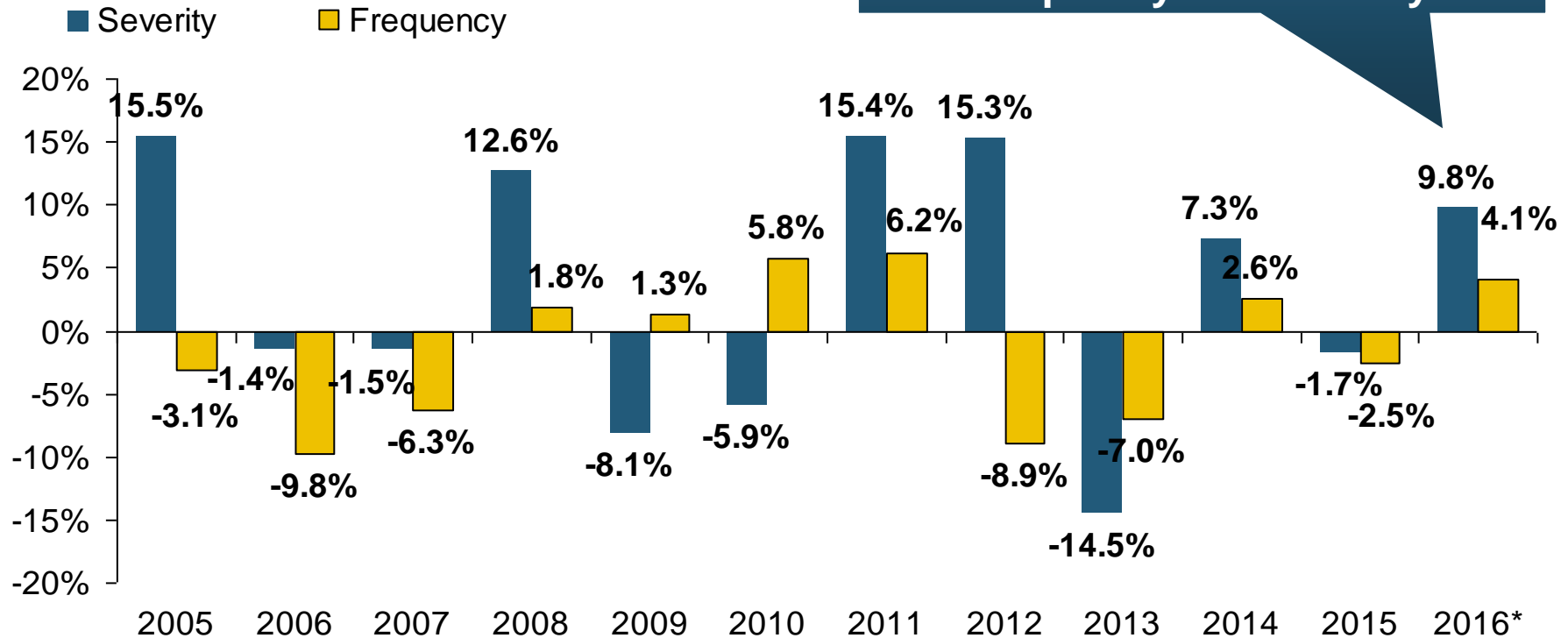
Severity/Frequency Trends Have Been Volatile, But Rising Severity since 2011 Is a Concern

*2016 figure is for the 4 quarters ending 2016:Q2.
 Source: ISO/PCI *Fast Track* data; Insurance Information Institute

Comprehensive Coverage: Frequency and Severity Trends Are Volatile

Annual Change, 2005 through 2016*

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



Weather Creates Volatility for Comprehensive Coverage

*2016 figure is for the 4 quarters ending 2016:Q2.

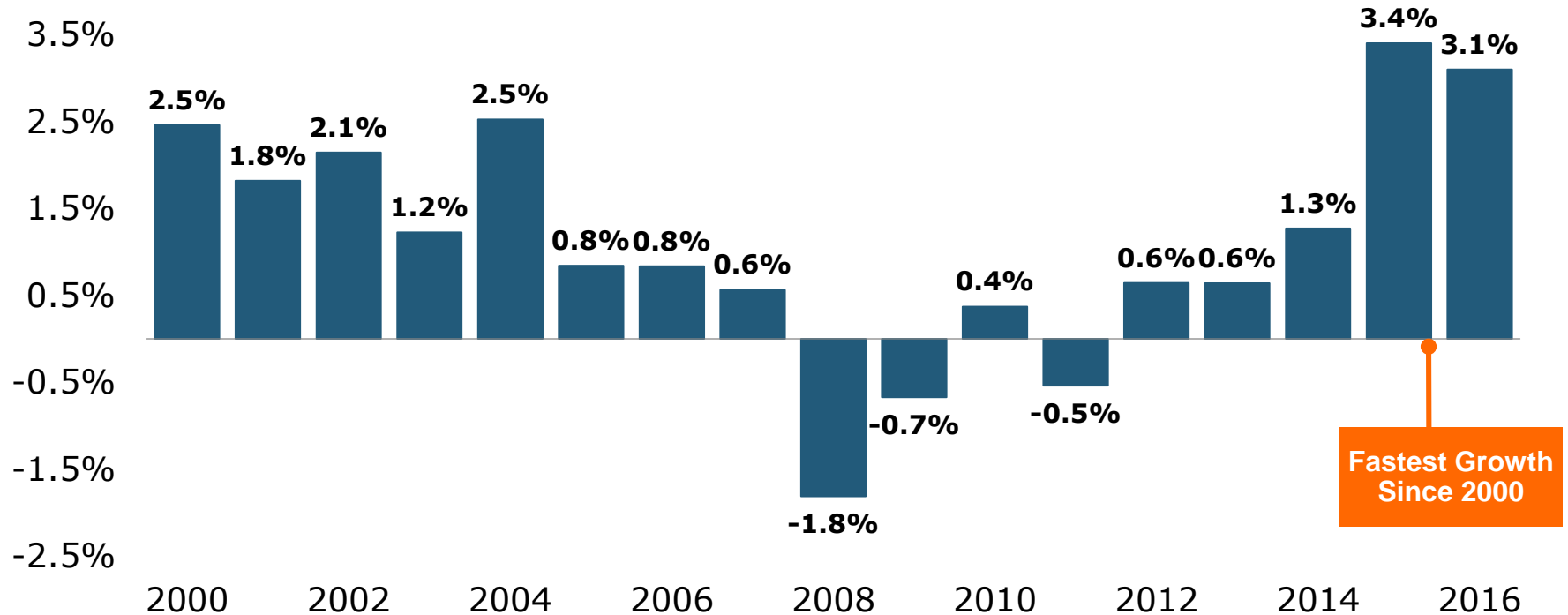
Source: ISO/PCI Fast Track data; Insurance Information Institute

A Few Factors Driving Adverse Private Passenger Auto Loss Trends

**More People Driving, More Miles
Driven, Lower Gas Prices,
Higher Speed Limits...**

America is Driving More Again: 2000-2016

Percent Change, Miles Driven*



Fastest Growth
Since 2000

Tremendous Growth In Miles Driven. The More People Drive, The More Frequently They Get Into Accidents.

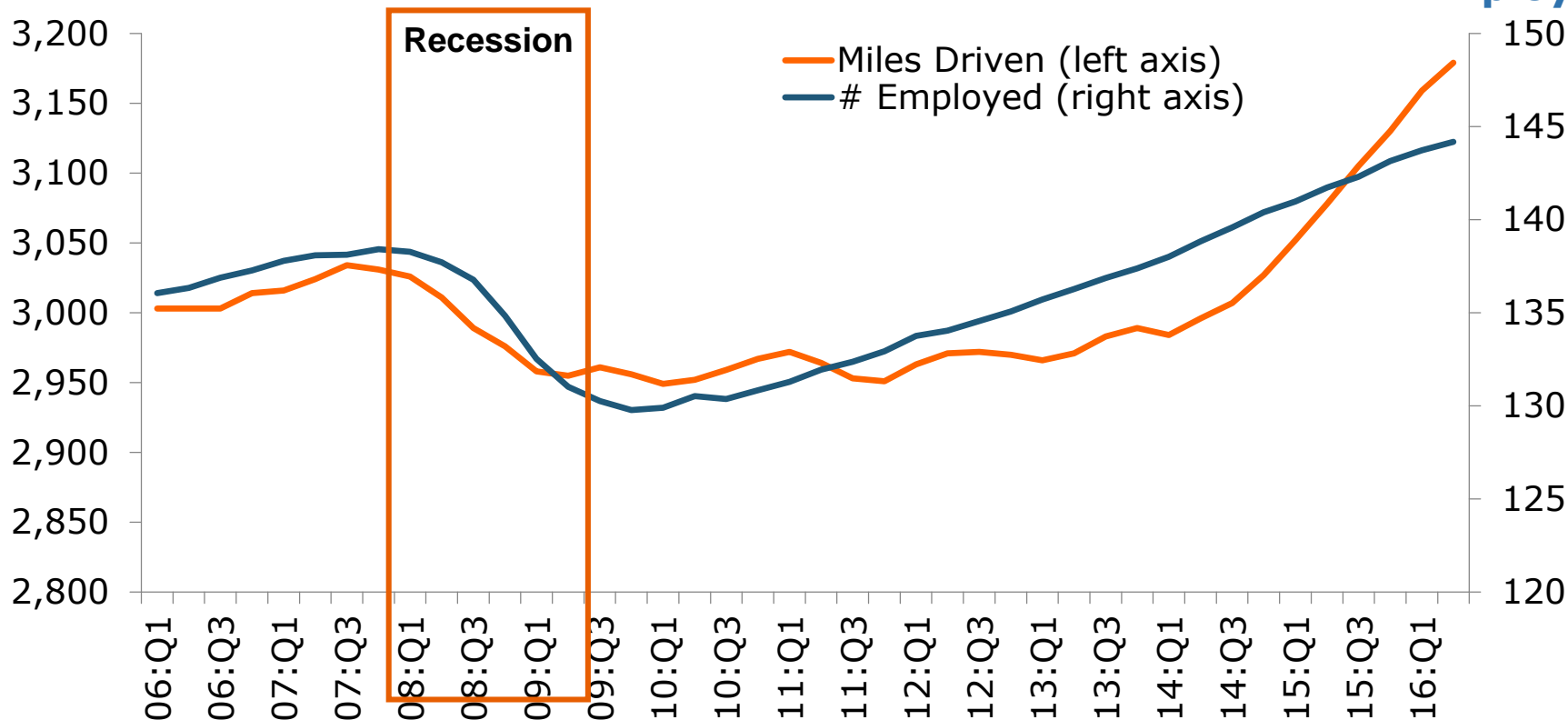
*2000-2015: Moving 12-month total vs. prior year. 2016 data through July 2016, the latest available, vs. July 2015.

Sources: [Federal Highway Administration](#); National Bureau of Economic Research (recession dates); Insurance Information Institute.

Why Are People Driving More Miles? Is it Jobs? 2006-2016:Q2

**Billions of Miles Driven
in Prior Year**

**Millions
Employed**

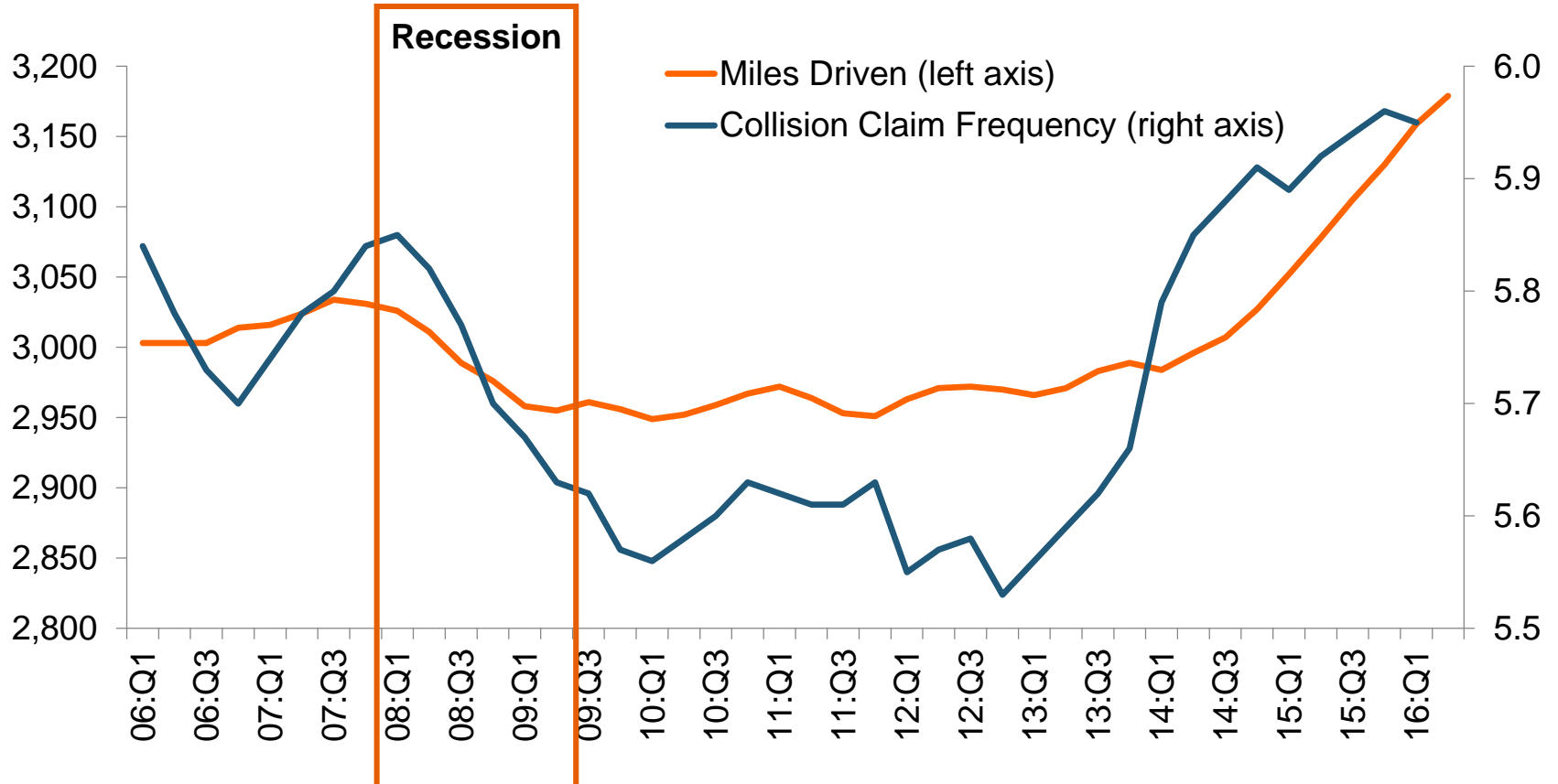


**People Drive to and from Work and Drive to Entertainment.
Out of Work, They Curtail Their Movement.**

More Miles Driven → More Collisions, 2006-2016:Q2

Billions of Miles
Driven in Prior Year

Overall Collision Claims
Per 100 Insured Vehicles



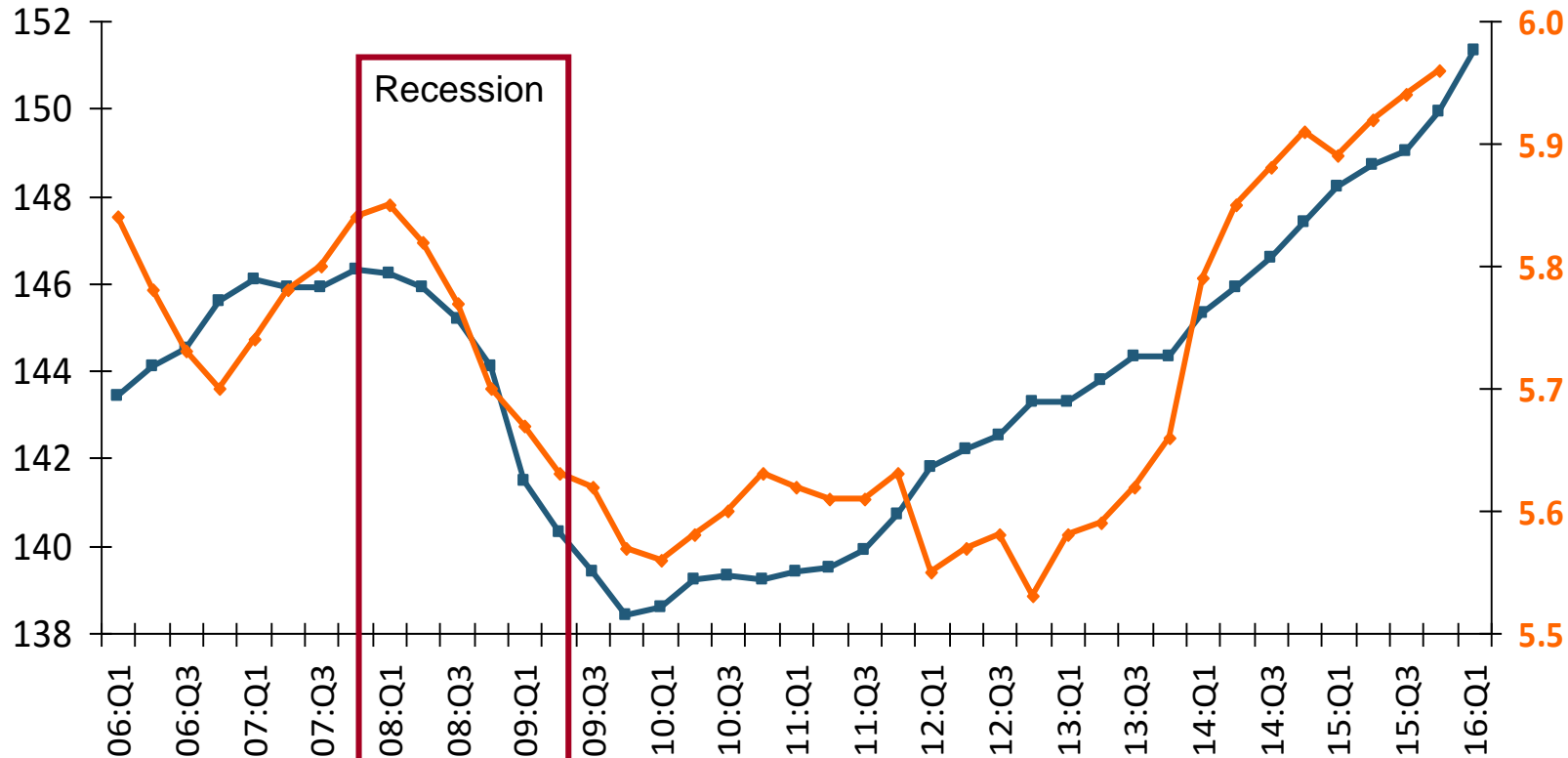
The More Miles People Drive, the More Likely They are to Get in an Accident, Helping Drive Claim Frequency Higher.

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

Number
Employed,
Millions

■ Number Employed (left scale) ◆ Collision Claim Frequency (right scale)

Overall
Collision Claims
Per 100 Insured
Vehicles

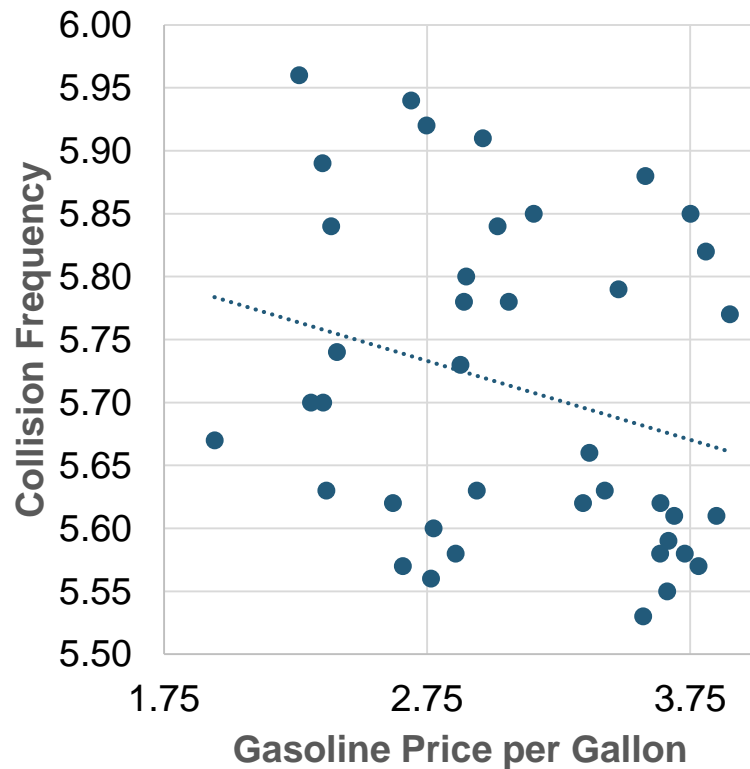


When people are out of work, they drive less. When they get jobs, they drive to work, helping drive claim frequency higher.

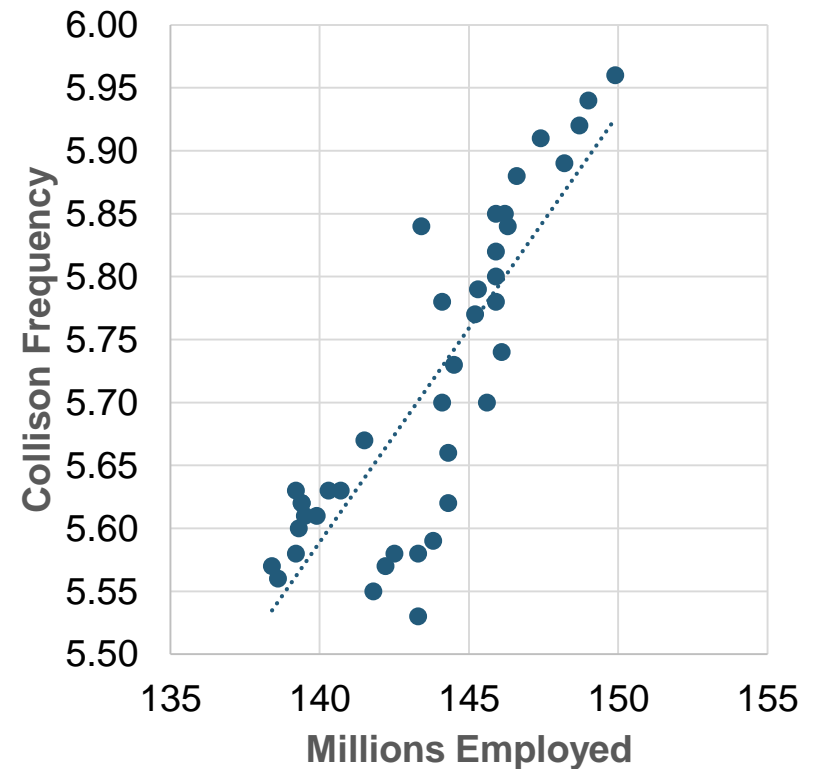
Sources: Seasonally Adjusted Employed from Bureau of Labor Statistics; Rolling Four-Qtr Avg. Frequency from Insurance Services Office; Insurance Information Institute.

Comparing Gas Prices, Employment on Collision Frequency Through 2015

Gas Price vs. Collision Frequency



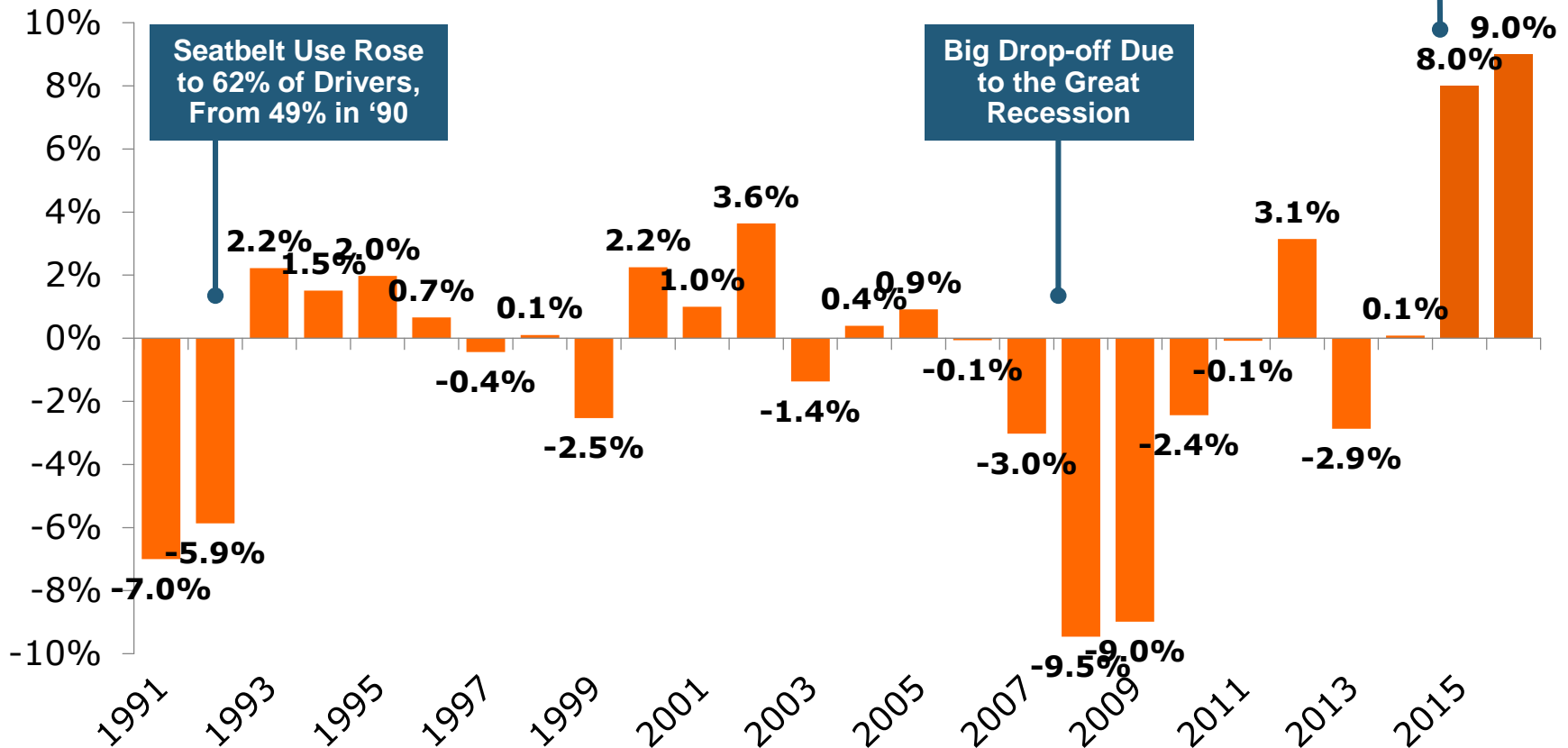
Number Employed vs. Collision Frequency



Severity: Driving Fatalities are Rising

On Track for 18%
Increase in Two
Years

Annual Change in Motor Vehicle Deaths



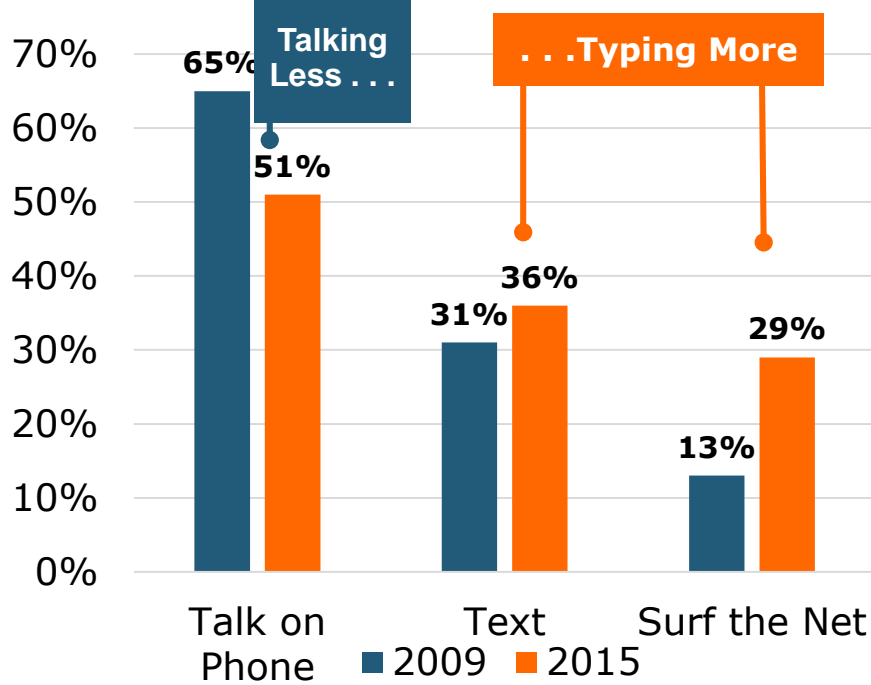
Driving Has Been Getting Safer for Decades, But Recent Trend is Discouraging—38,300 Deaths in 2015.

What About Distractions?

It's A Problem. But Is It Growing?

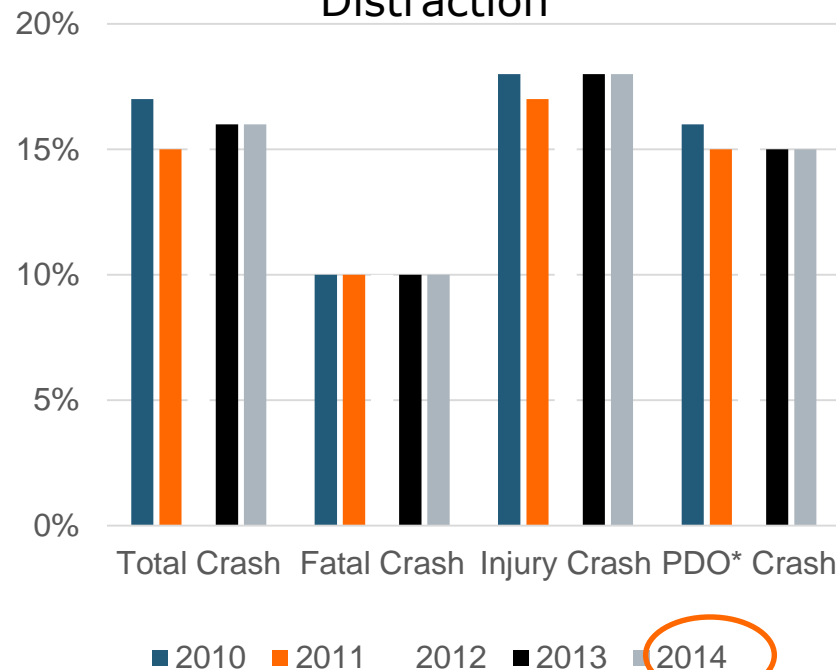
What We Do Behind The Wheel

Percentage of Drivers Who . . .



But Impact Is Not Clear

Percentage of Crashes Involving Distraction

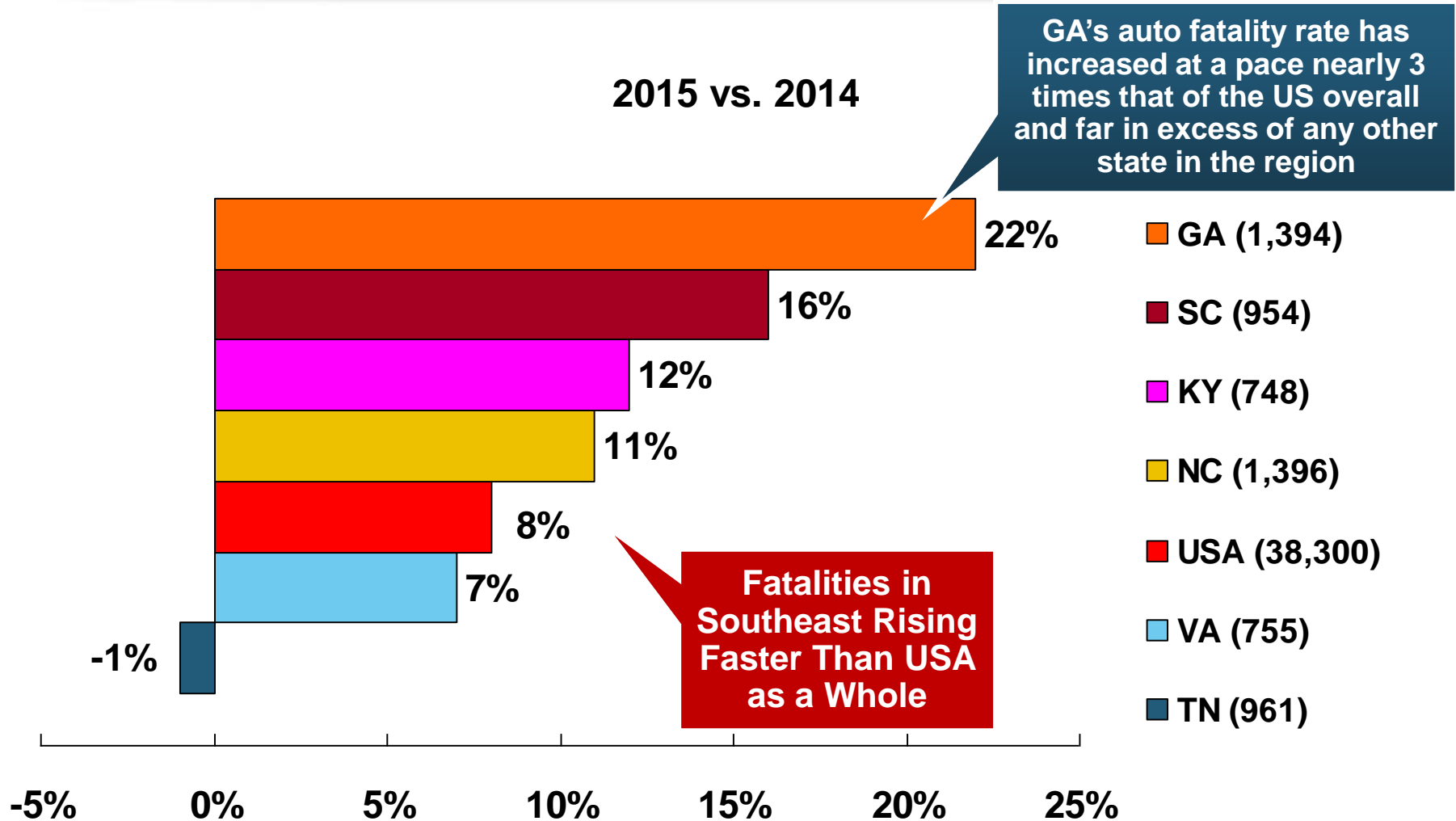


* Property Damage Only.

SOURCES: State Farm, National Highway Transportation Safety Administration (distraction.gov)

Most Recent Year

Change in Auto Fatalities by State: Especially Severe in Georgia



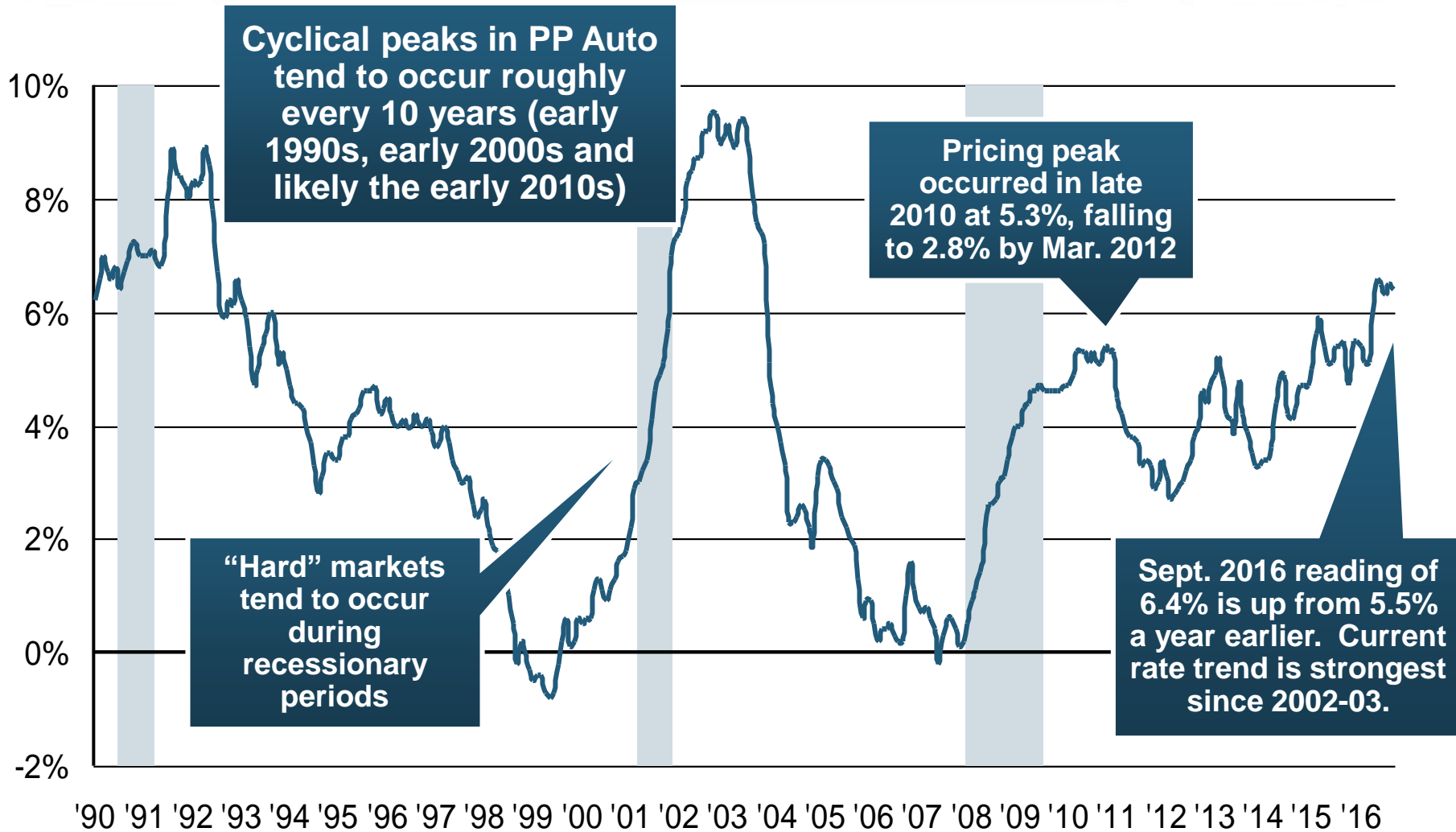
SOURCE: Estimates from National Safety Council.



Personal Lines Growth Drivers

**Rate and Exposure are Both
Presently Important
Growth Drivers**

Monthly Change in Auto Insurance Prices, 1991–2016*

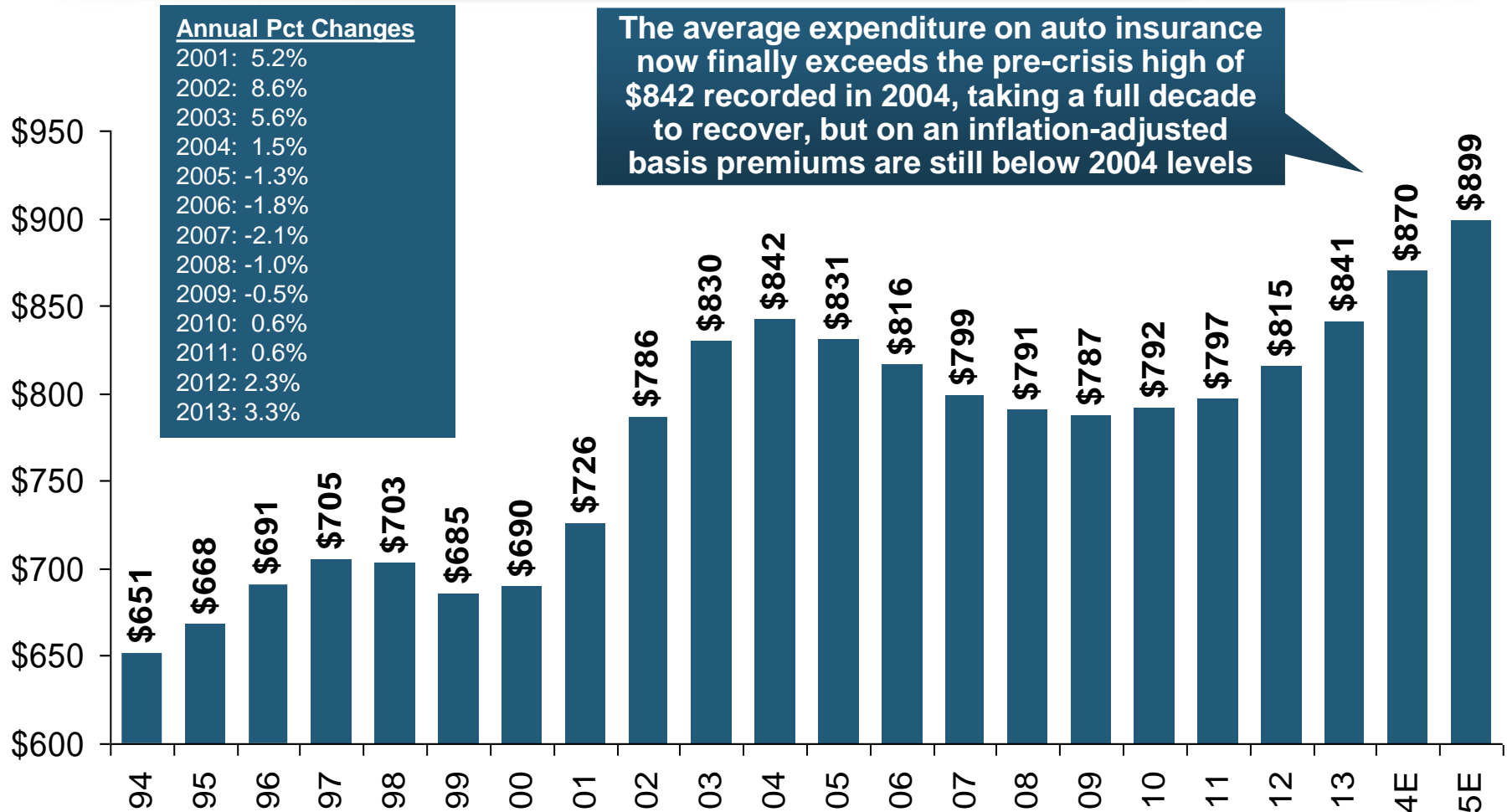


*Percentage change from same month in prior year; through Sept. 2016; seasonally adjusted

Note: Recessions indicated by gray shaded columns.

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

Average Expenditures* on Auto Insurance, 1994-2015E

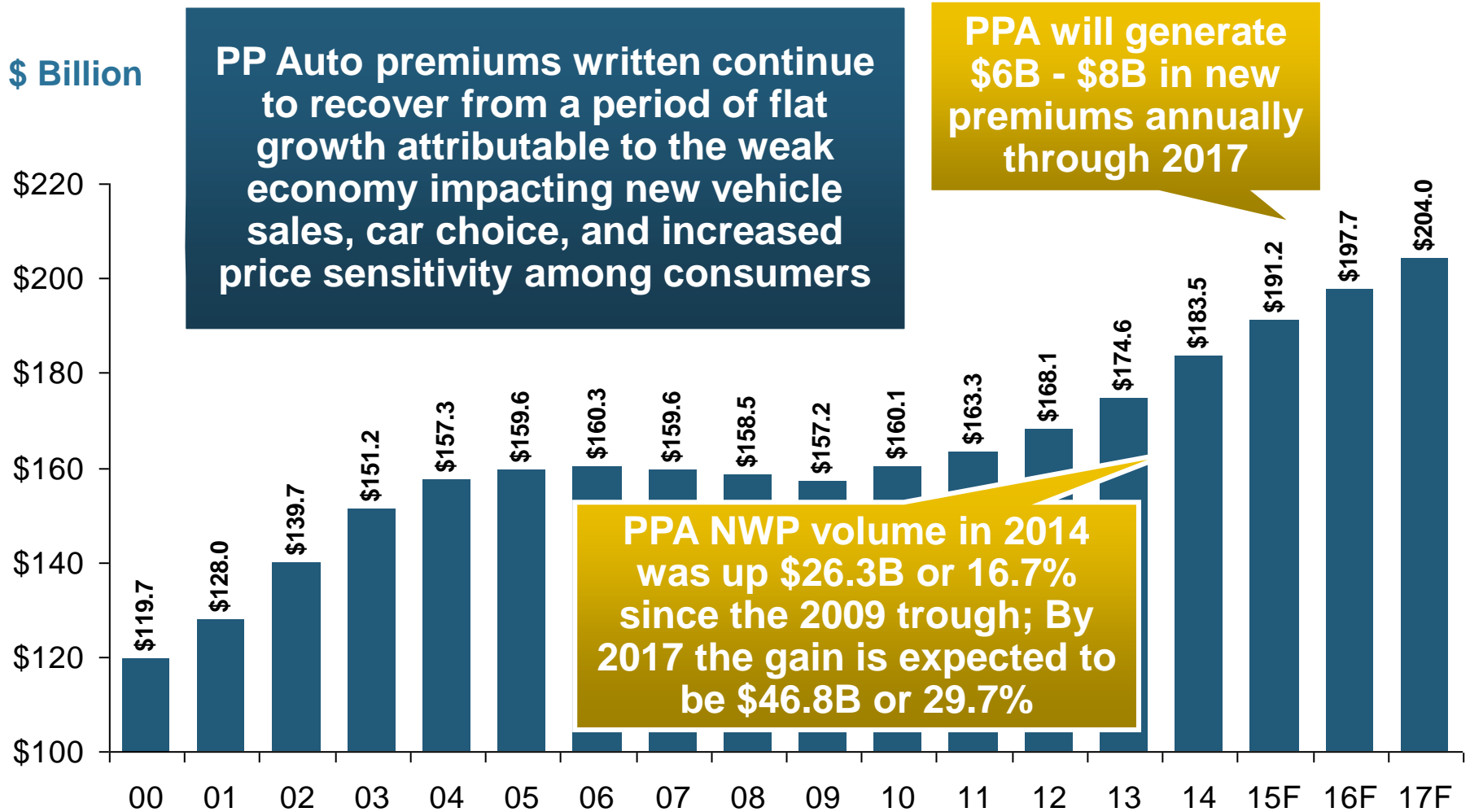


Across the U.S., auto insurance expenditures fell by 0.8% in 2008 and 0.5% in 2009 but rose 0.5% in 2010, 0.8% in 2011, 2.3% in 2012 and 3.3% in 2013; I.I.I. estimate is for +3.4% in 2014 and 2015.

* 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.

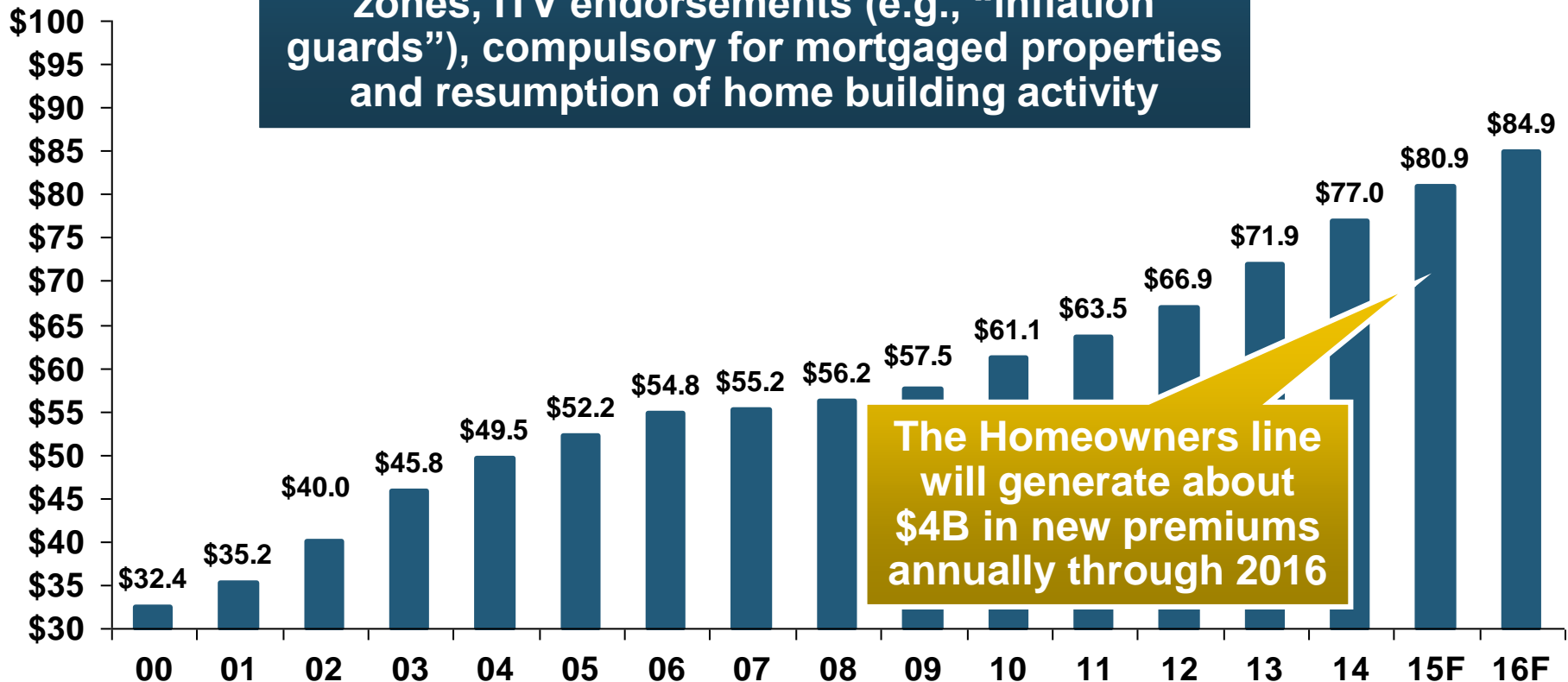
Private Passenger Auto Insurance Net Written Premium, 2000–2017F



Homeowners Insurance Net Written Premium, 2000–2016F

\$ Billions

Homeowners insurance NWP continues to rise (up 150% 2000-2015F) despite very little unit growth during the real estate crash. Reasons include rate increases, especially in coastal zones, ITV endorsements (e.g., “inflation guards”), compulsory for mortgaged properties and resumption of home building activity

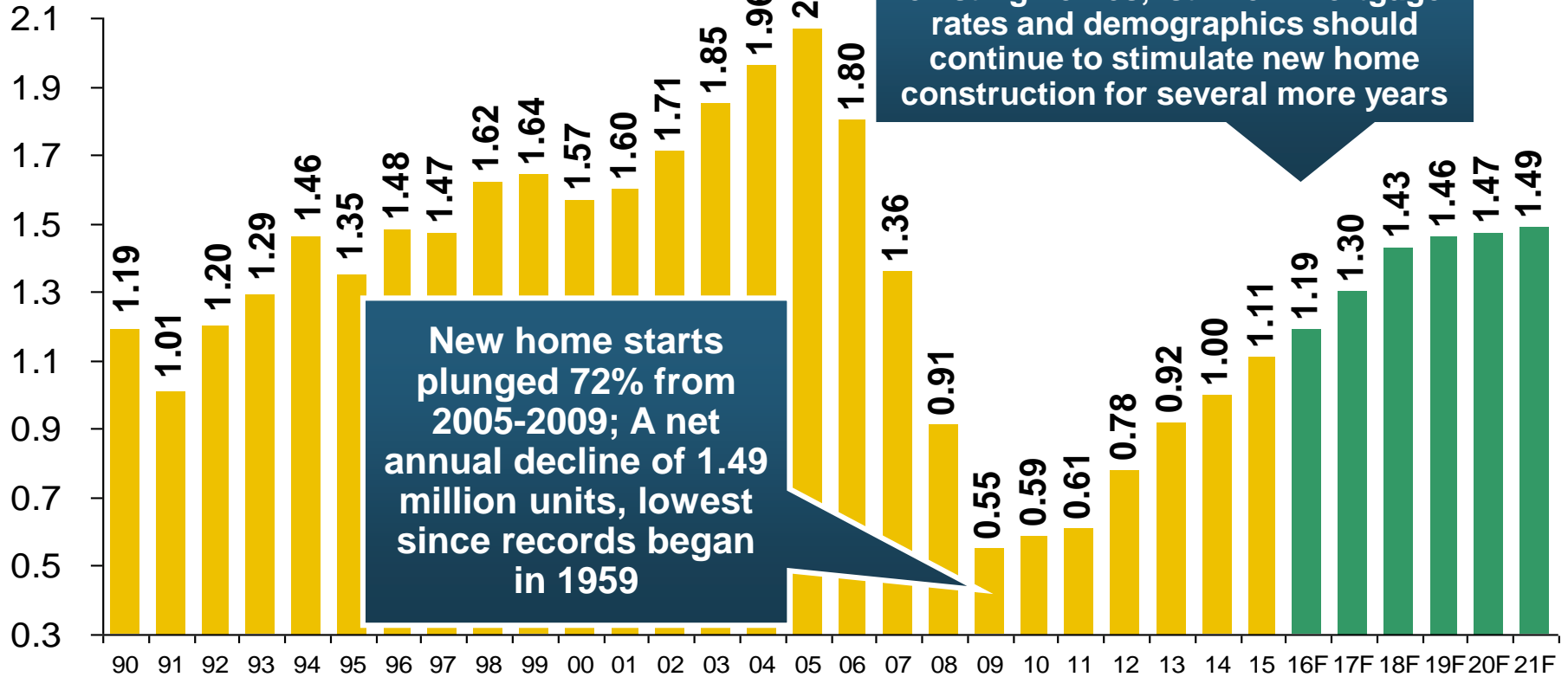


Personal Lines: Economic and Demographic Considerations

Auto, Home Are Sensitive to Underlying Economic Conditions

New Private Housing Starts, 1990-2021F

(Millions of Units)



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

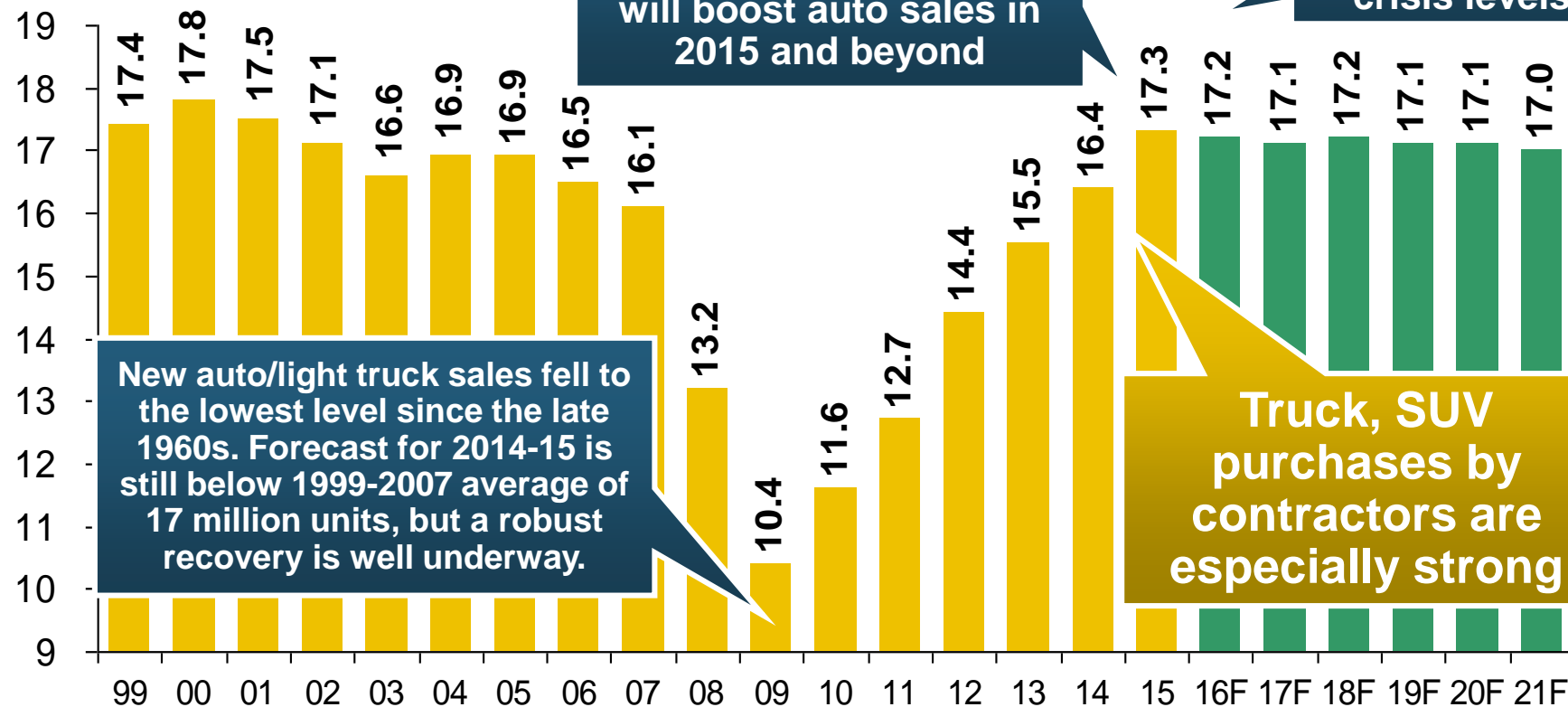
New home starts plunged 72% from 2005-2009; A net annual decline of 1.49 million units, lowest since records began in 1959

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

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (9/16 for 2016-17; 3/16 for 2018-21F; Insurance Information Institute.

Auto/Light Truck Sales, 1999-2021F

(Millions of Units)



Job growth and improved credit market conditions will boost auto sales in 2015 and beyond

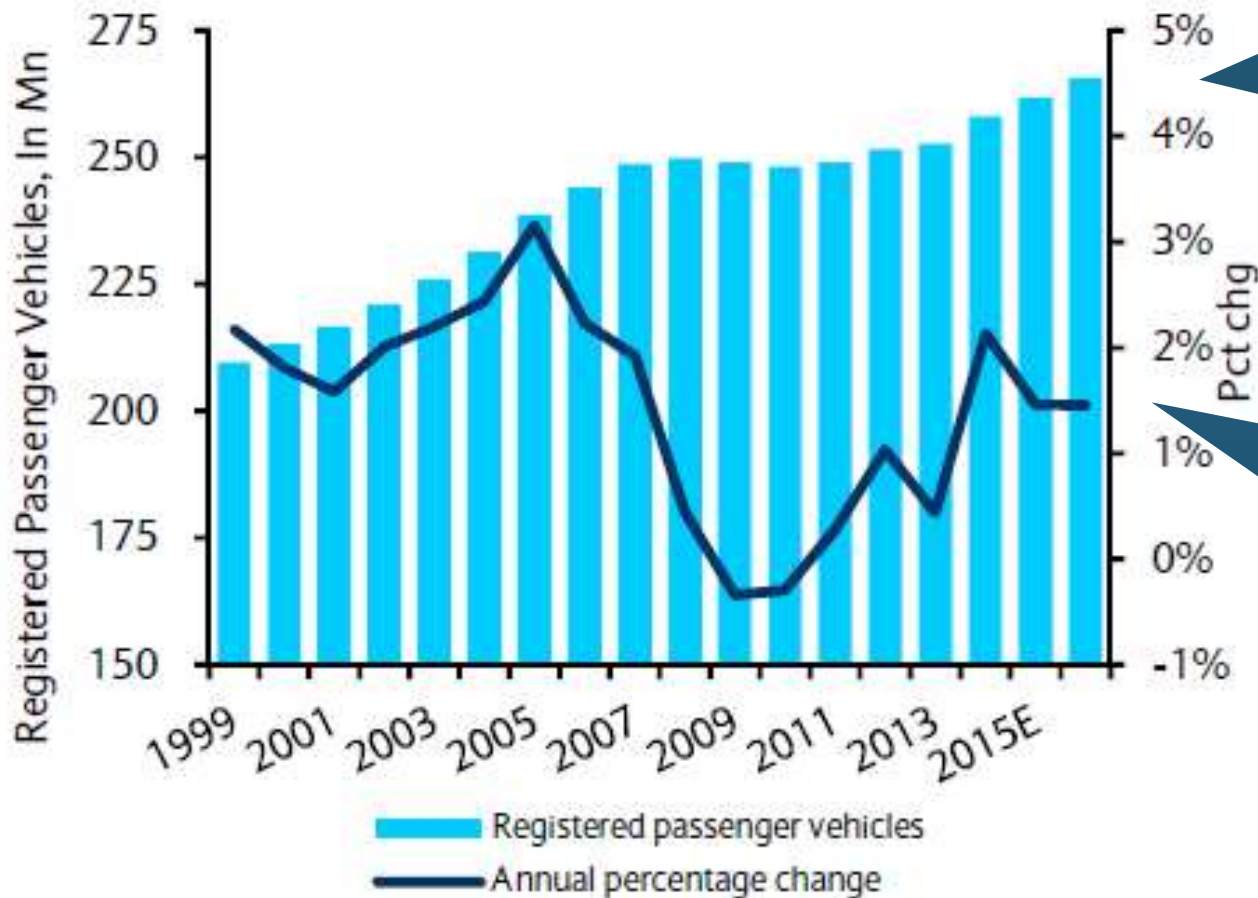
Sales have returned to pre-crisis levels

New auto/light truck sales fell to the lowest level since the late 1960s. Forecast for 2014-15 is still below 1999-2007 average of 17 million units, but a robust recovery is well underway.

Truck, SUV purchases by contractors are especially strong

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%.

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

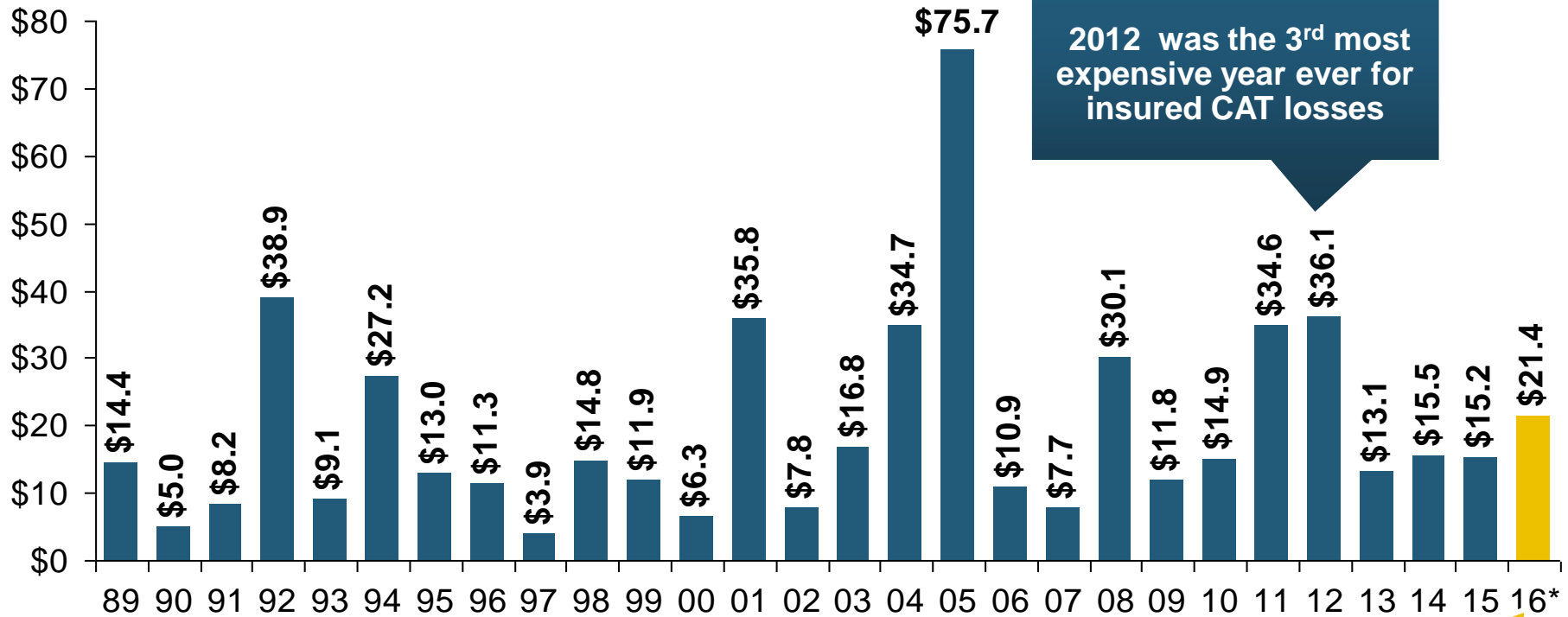
Insured Catastrophe Losses

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

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

U.S. Insured Catastrophe Losses

(\$ Billions, \$ 2015)



2012 was the 3rd most expensive year ever for insured CAT losses

2013/14/15 Were Welcome Respite from 2011/12, among the Costliest Years for Insured Disaster Losses in US History. 2016 Is Off to a Costlier Start.

2016 will be the heaviest cat year since 2012. Figure includes a \$4.4B est. for Hurricane Matthew

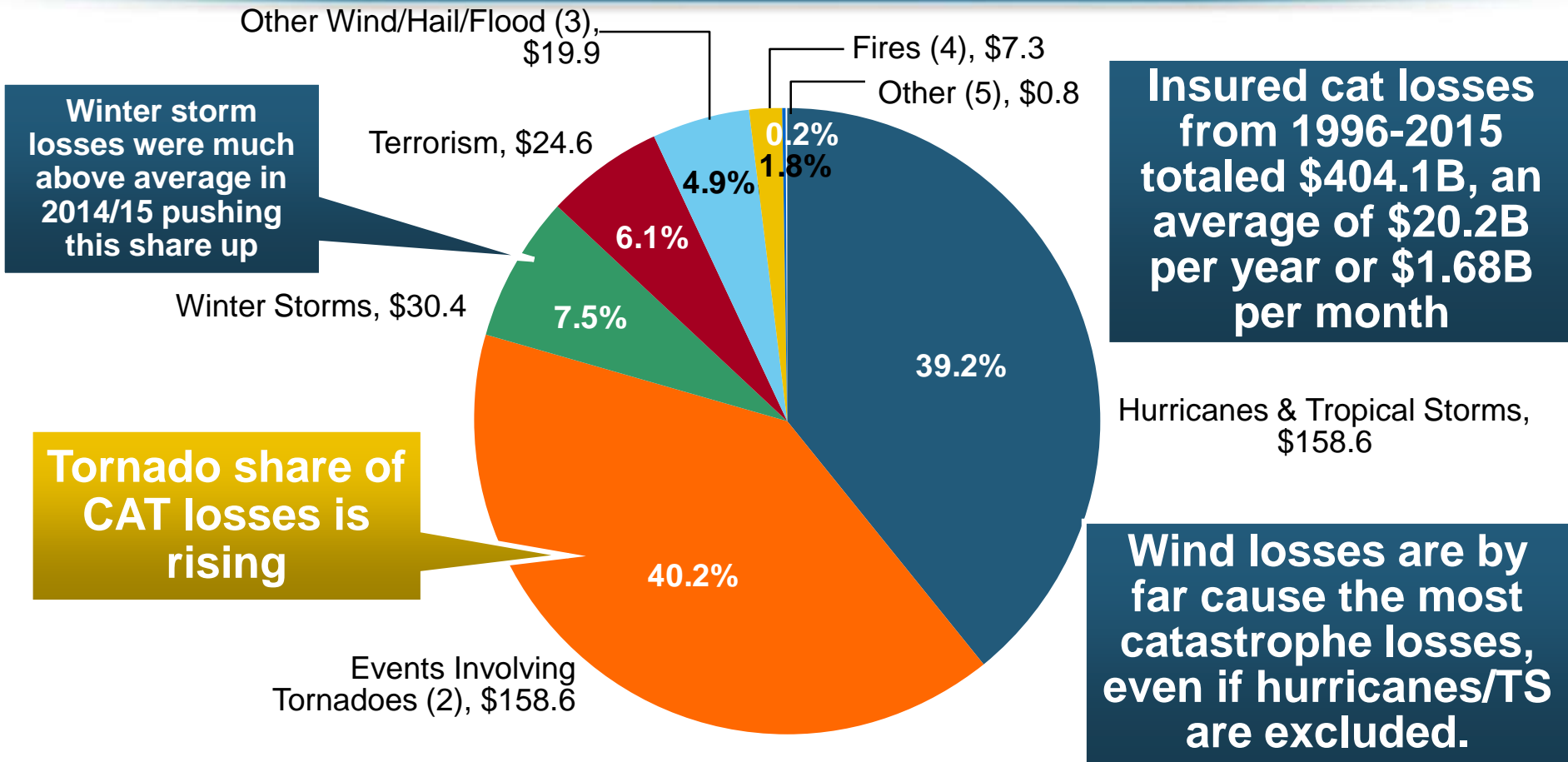
*Through 10/20/16. 2016 figure stated in 2016 dollars. Figure includes \$17 in known loss plus an estimate of \$4.4B for Hurricane Matthew.
 Note: 2001 figure includes \$20.3B for 9/11 losses reported through 12/31/01 (\$25.9B 2011 dollars). Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = \$12.2B (\$15.6B in 2011 dollars.)
 Sources: Property Claims Service/ISO; Insurance Information Institute.

Top 5 Insured Catastrophe Losses of 2016*

Cat No.	Period	States	Storm Family	Estimated Loss \$
1625	Apr 10 - 15	FL, TX	Wind and Thunderstorm Event	2,995,100,000
1621	23-Mar	TX	Wind and Thunderstorm Event	1,688,500,000
1628	Apr 29 / May 3	AR, GA, IL, IN, MD, MO, NC, OK, TX, VA, WV	Wind and Thunderstorm Event	1,187,040,000
1644	Aug 11 - 15	LA, MS	Wind and Thunderstorm Event	1,058,870,000
1620	Mar 17 - 18	AL, AR, FL, LA, MS, TX	Wind and Thunderstorm Event	920,105,000

*As of Oct. 20. No official estimate for Hurricane Matthew was yet available from PCS.
Source: Property Claim Services division of Verisk Analytics as of Oct. 20, 2015.

Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1996–2015¹



Winter storm losses were much above average in 2014/15 pushing this share up

Insured cat losses from 1996-2015 totaled \$404.1B, an average of \$20.2B per year or \$1.68B per month

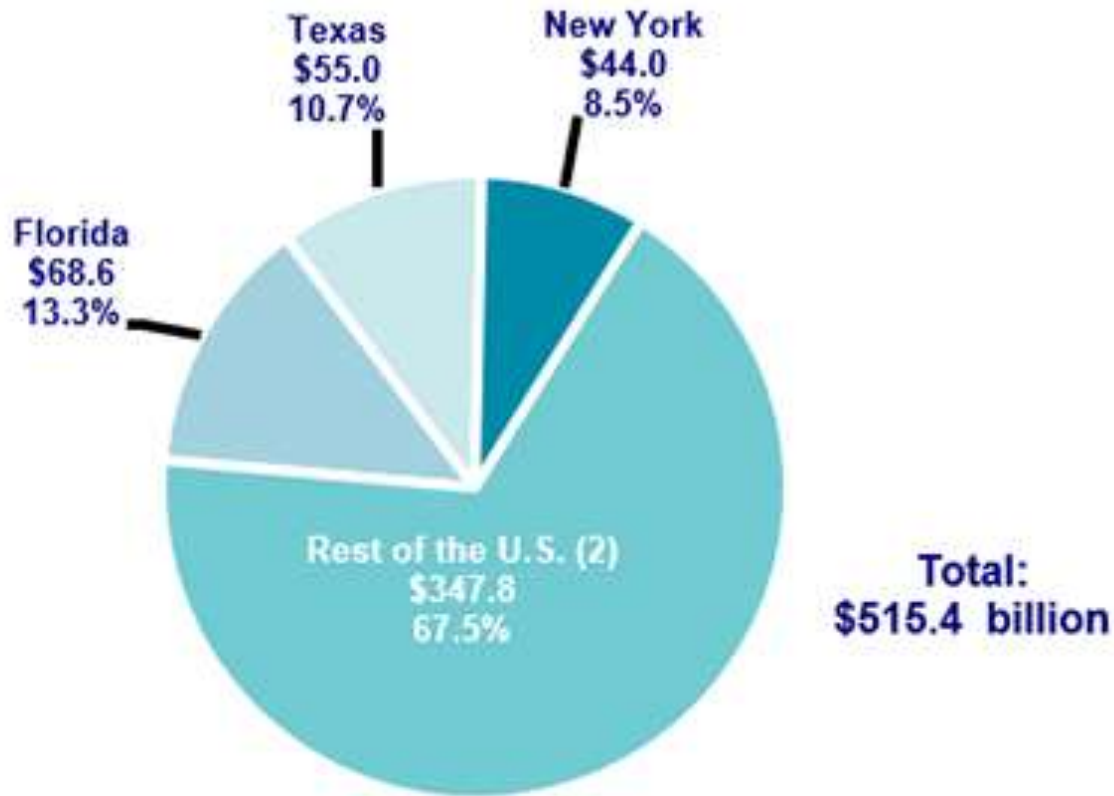
Tornado share of CAT losses is rising

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 2015 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.

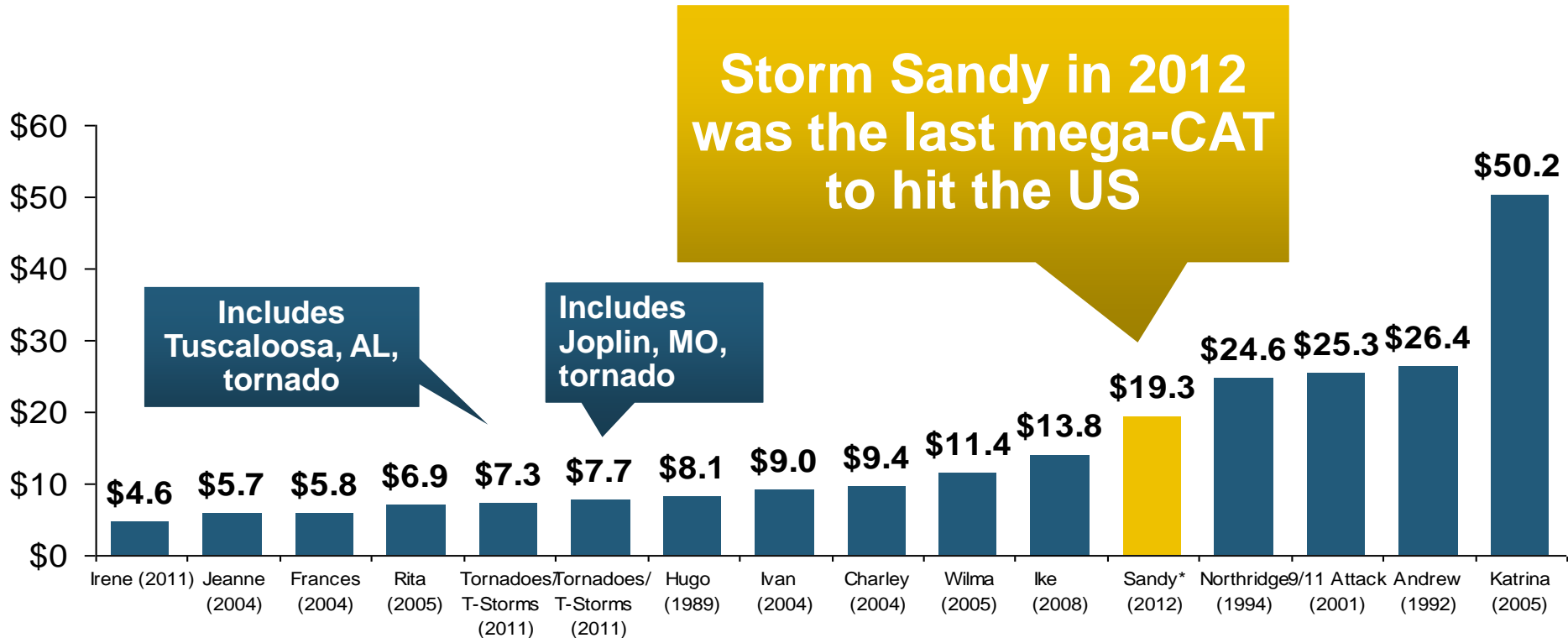
Top 3 States for Insured Catastrophe Losses, 1996-2015 (in 2015 Dollars)



Texas, Florida and New York lead the country in insured catastrophe losses over the past 20 years. These 3 states accounted for nearly 1/3 of all insured catastrophe losses over the past two decades

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

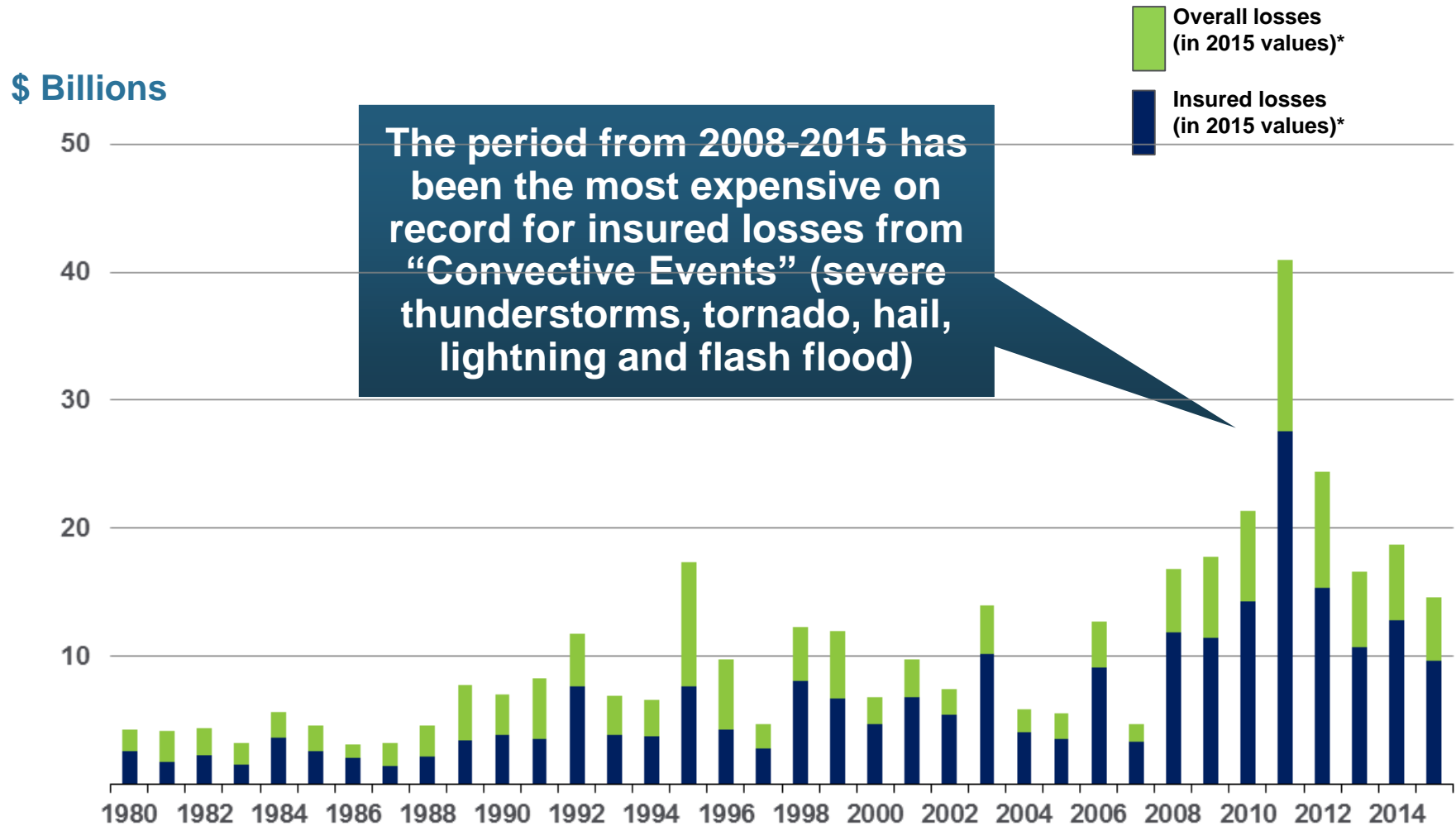
(Insured Losses, 2014 Dollars, \$ Billions)



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

Convective Loss Events in the US

Overall and insured losses, 1980 – 2015



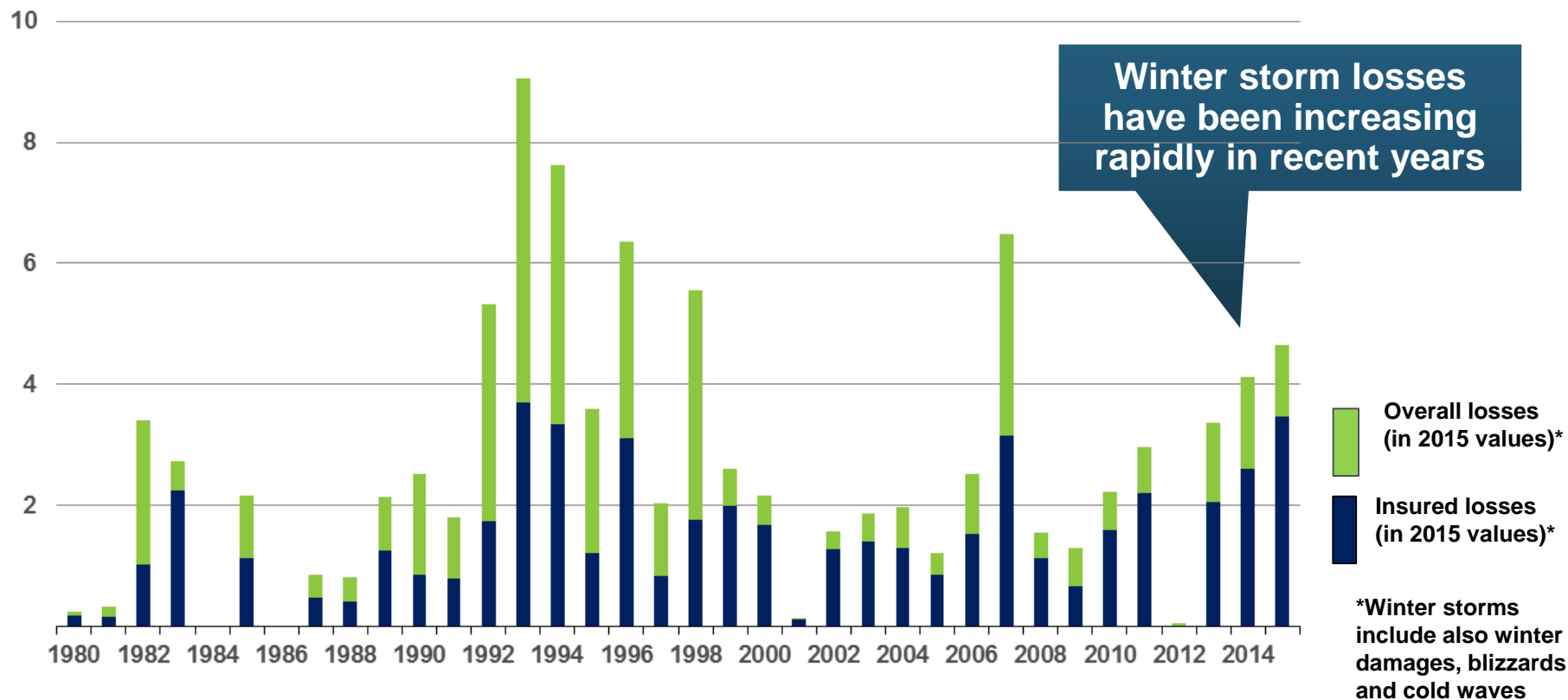
*Losses adjusted to inflation based on CPI

Analysis contains:

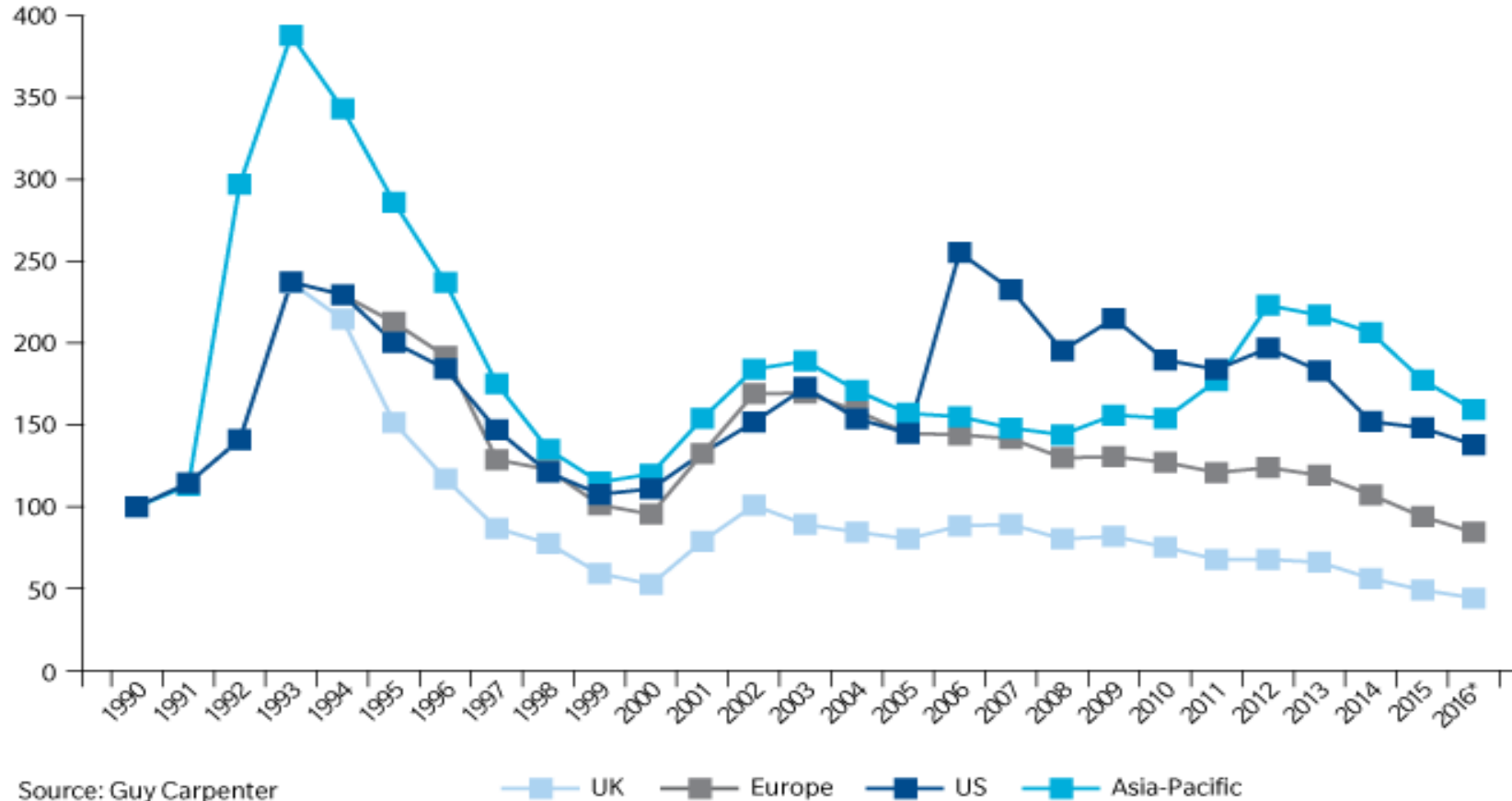
severe storm, tornado, hail, flash flood and lightning

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

\$ Billions



Regional Property Catastrophe ROL Index: 1990 – 2016



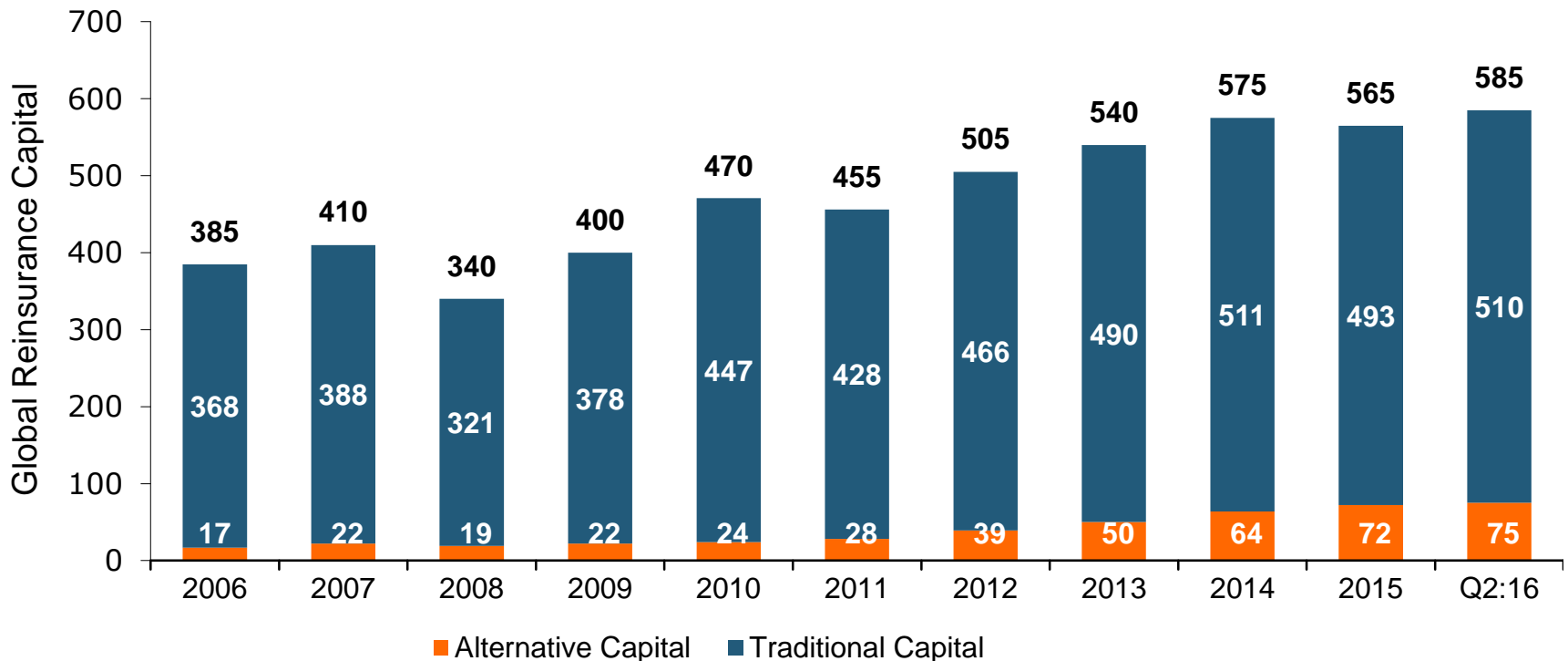
Source: Guy Carpenter

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

Source: Guy Carpenter; Insurance Information Institute.

Alternative Capital Potentially Disrupting the Bank Account

(Billions of USD)



Alternative capacity has grown 263% since 2008. It has more than tripled in the past six years.

INDUSTRY DISRUPTORS

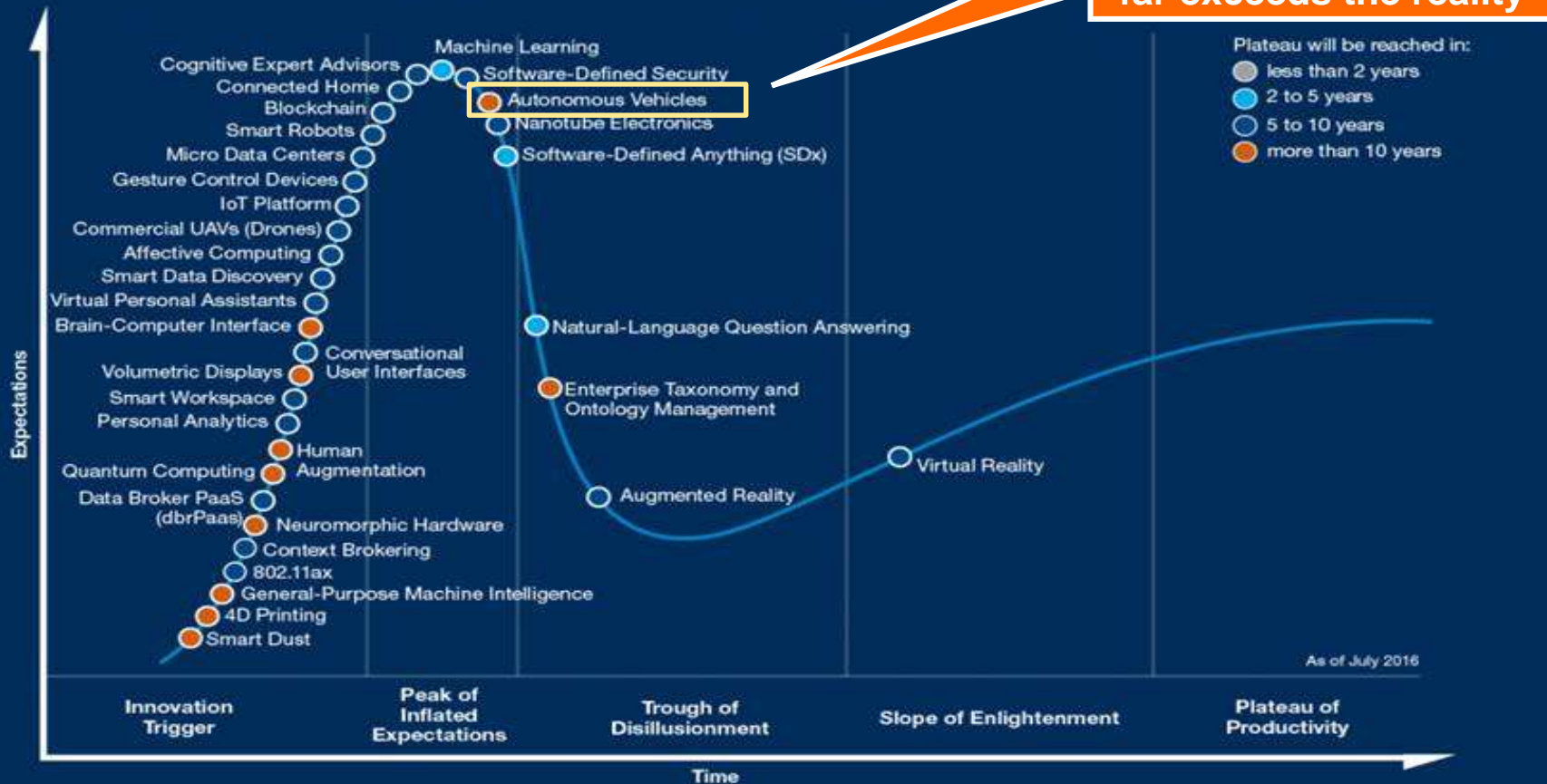
**Technology, Society and
the Economy Are All
Changing at a Rapid Pace**

***Reality vs. Drinking the
Silicon Valley Kool Aid***

The Sharing Economy Has Grown— And Attracted Political Scrutiny

There's no question that the hype around autonomous vehicles far exceeds the reality

Emerging Technology Hype Cycle for 2016



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

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



U B E R



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>



AUTO TECHNOLOGY & THE FUTURE OF AUTO INSURANCE

**The Road to Fully Autonomous Vehicles:
Long, Dark and Full of Potholes**

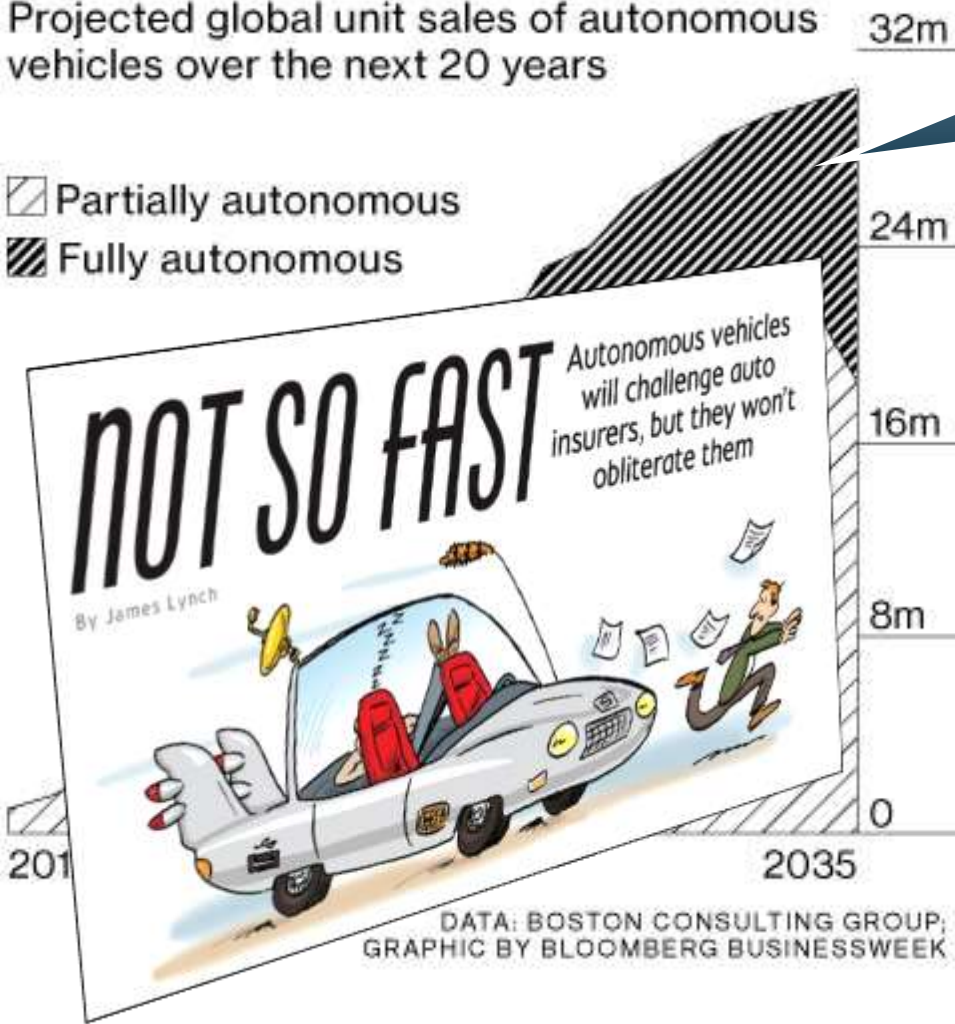
***Tales of the Death of Auto Insurance Are
Greatly Exaggerated***

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

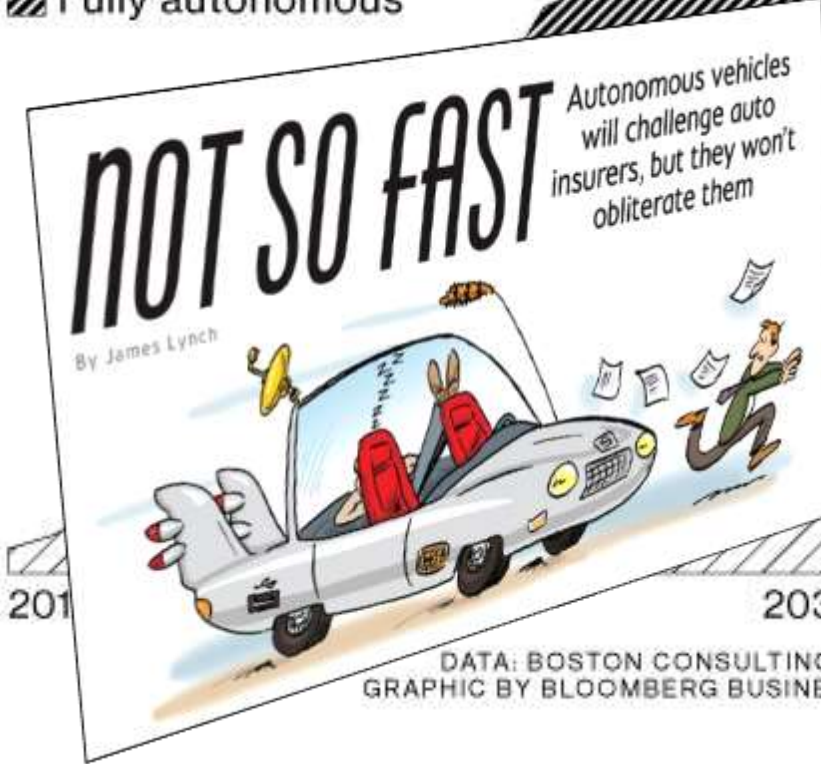
- ▨ Partially autonomous
- ▩ Fully autonomous



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?



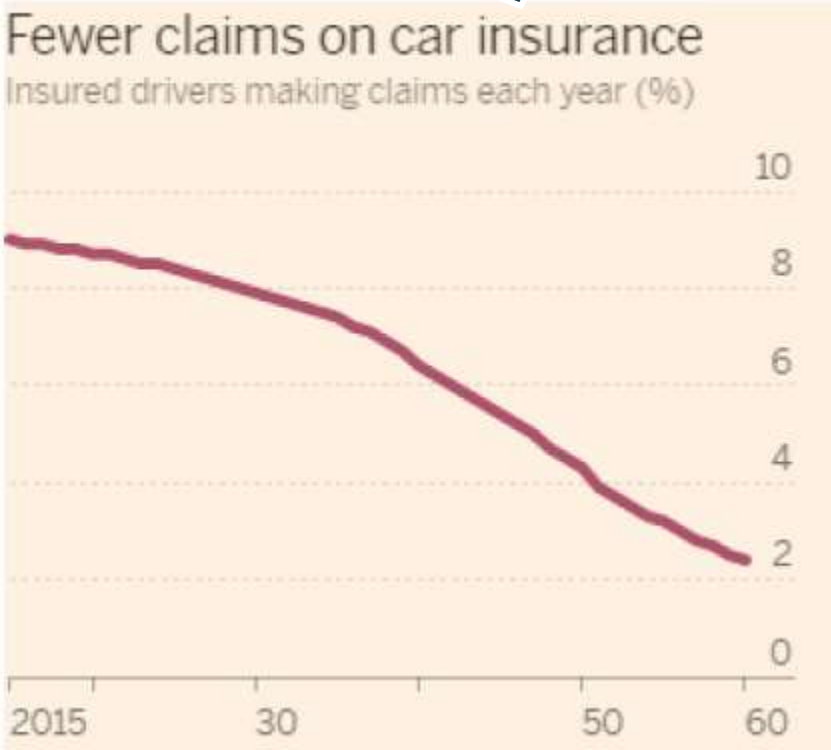
DATA: BOSTON CONSULTING GROUP; GRAPHIC BY BLOOMBERG BUSINESSWEEK

Source: Boston Consulting Group.

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

Some are predicting that the rise of autonomous vehicles will reduce claim frequency by 75% or more...

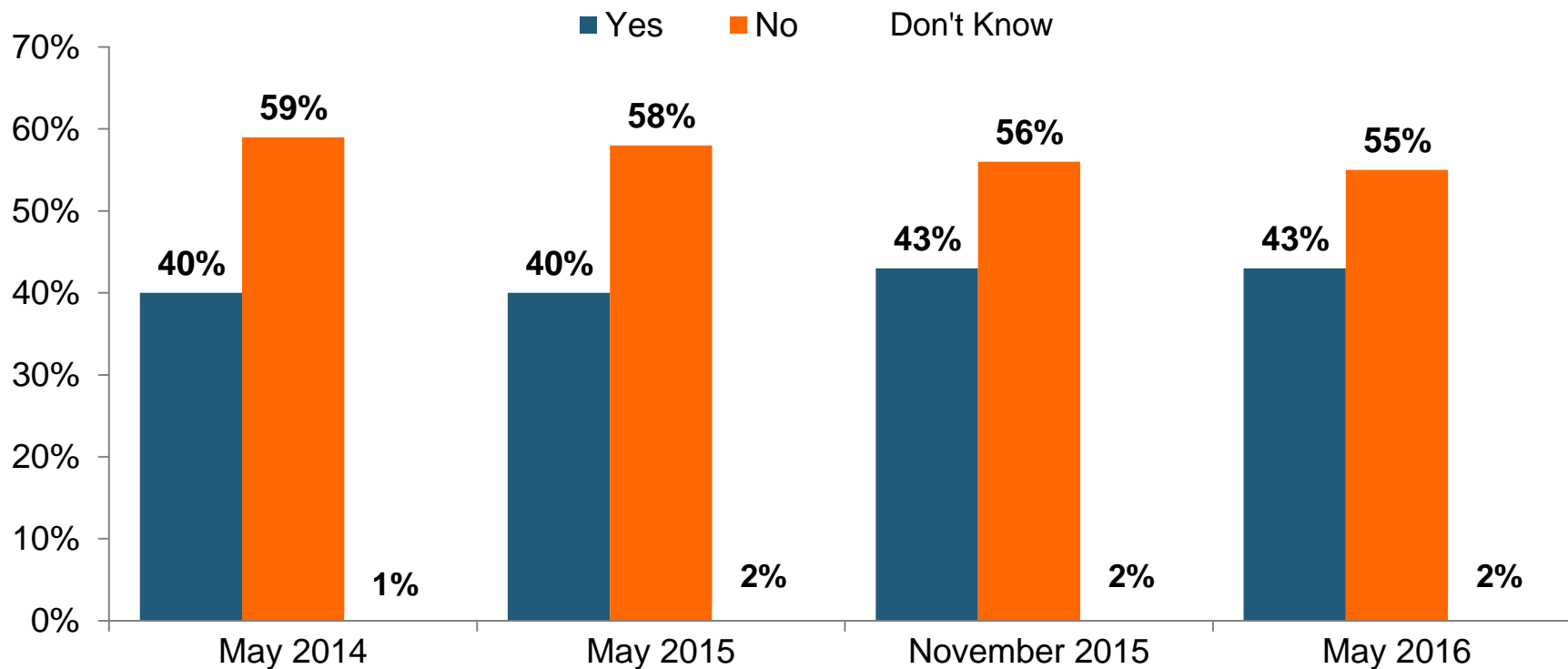
„,„and that this technology will cause average auto insurance premiums to plunge



Source: Autonomous Consulting as cited in the Financial Times: "Cost of Car Insurance to Plunge With Rise of Driverless Vehicles, June 28, 2016.

I.I.I. Poll: Driverless Cars

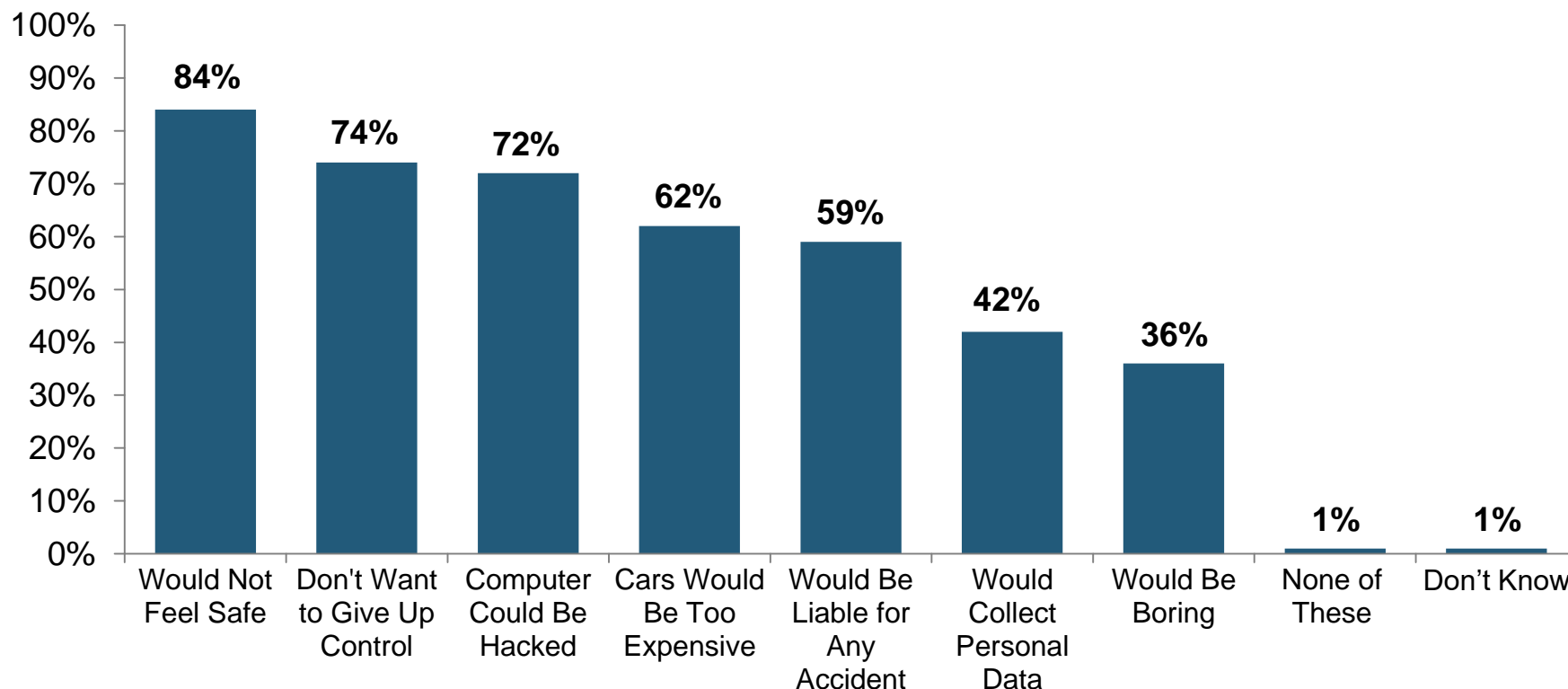
Q. Would you be willing to ride in a driverless car?



**The Percentage Willing to Ride in a Driverless Car Remains at 43%;
71% of People Over 64 Were Unwilling to Ride.**

I.I.I. Poll: Driverless Cars

Why Americans Would Not Want to Ride in a Driverless Car, May 2016¹



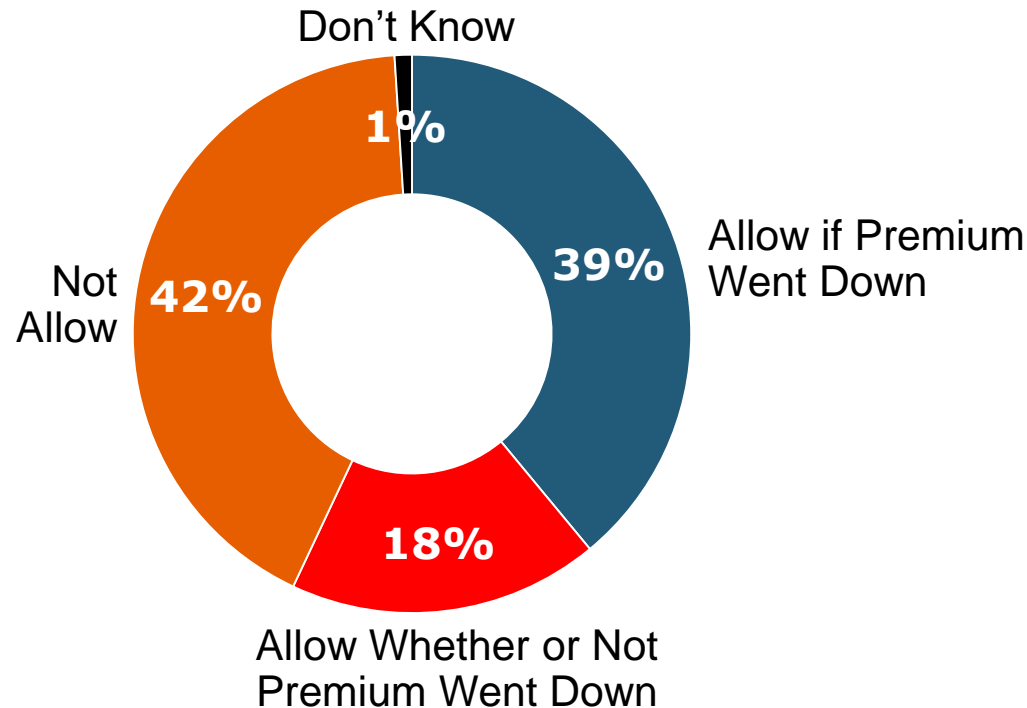
Safety Concerns Are Paramount Among Those Who Would Avoid Driverless Cars.

¹ Based on those who would not ride in a driverless car. Respondents could give more than one answer. Source: Insurance Information Institute Annual *Pulse* Survey.

I.I.I. Poll: Telematics— Consumers Still Hesitant

Q

Would you allow your auto insurer to collect information about how and when you drive in order to set your auto insurance premium?



More Than Half of Auto Policyholders Would Allow Their Insurer to Collect Their Driving Information in Order to Set Premiums.

¹Asked of those who have auto insurance.

Source: Insurance Information Institute Annual *Pulse* Survey.

Telematics for Your Home: The Internet of Things

- 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*

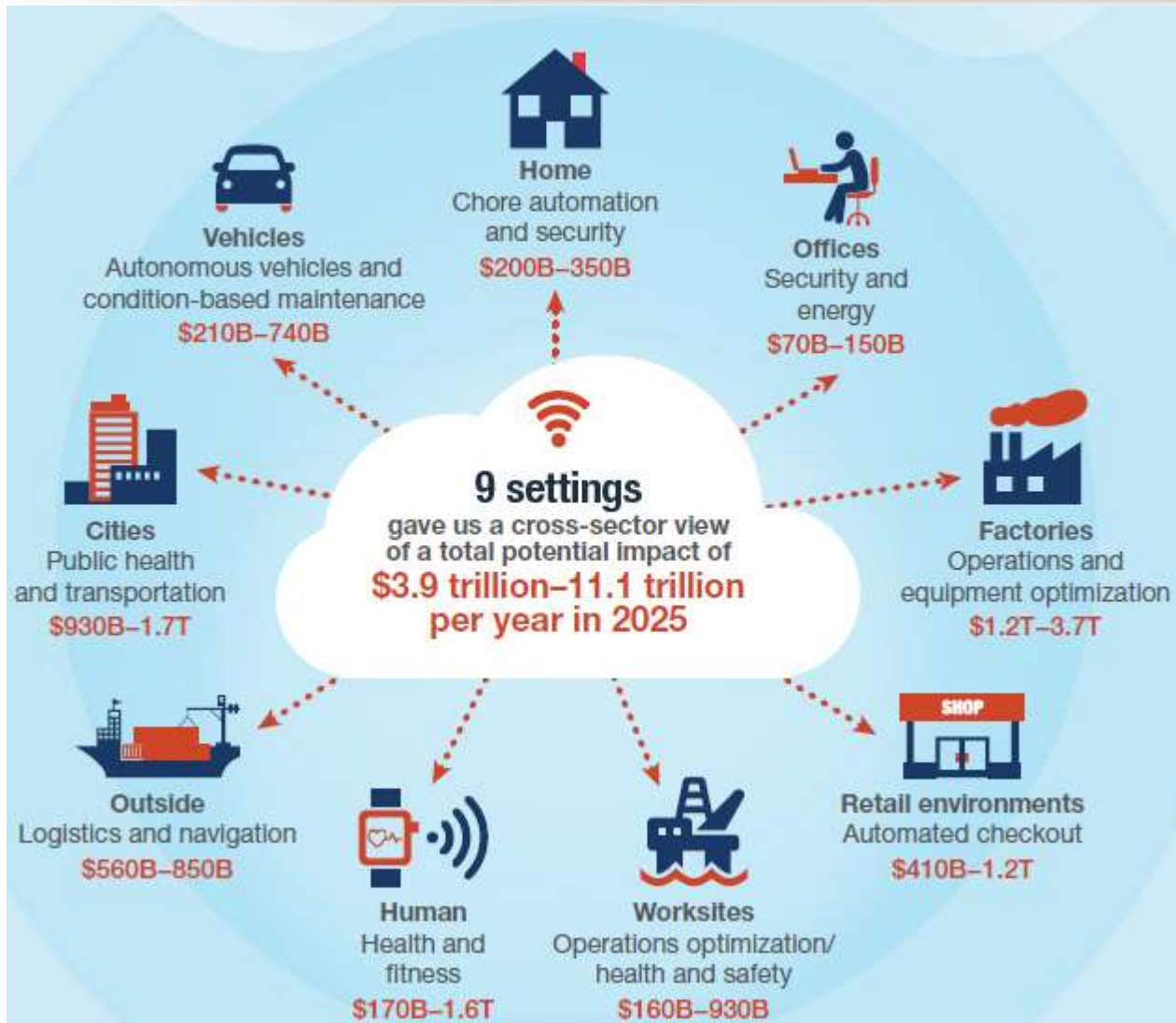




THE 'INTERNET OF THINGS'

Capturing Economic Value Amid a Shifting Insurer Value Chain

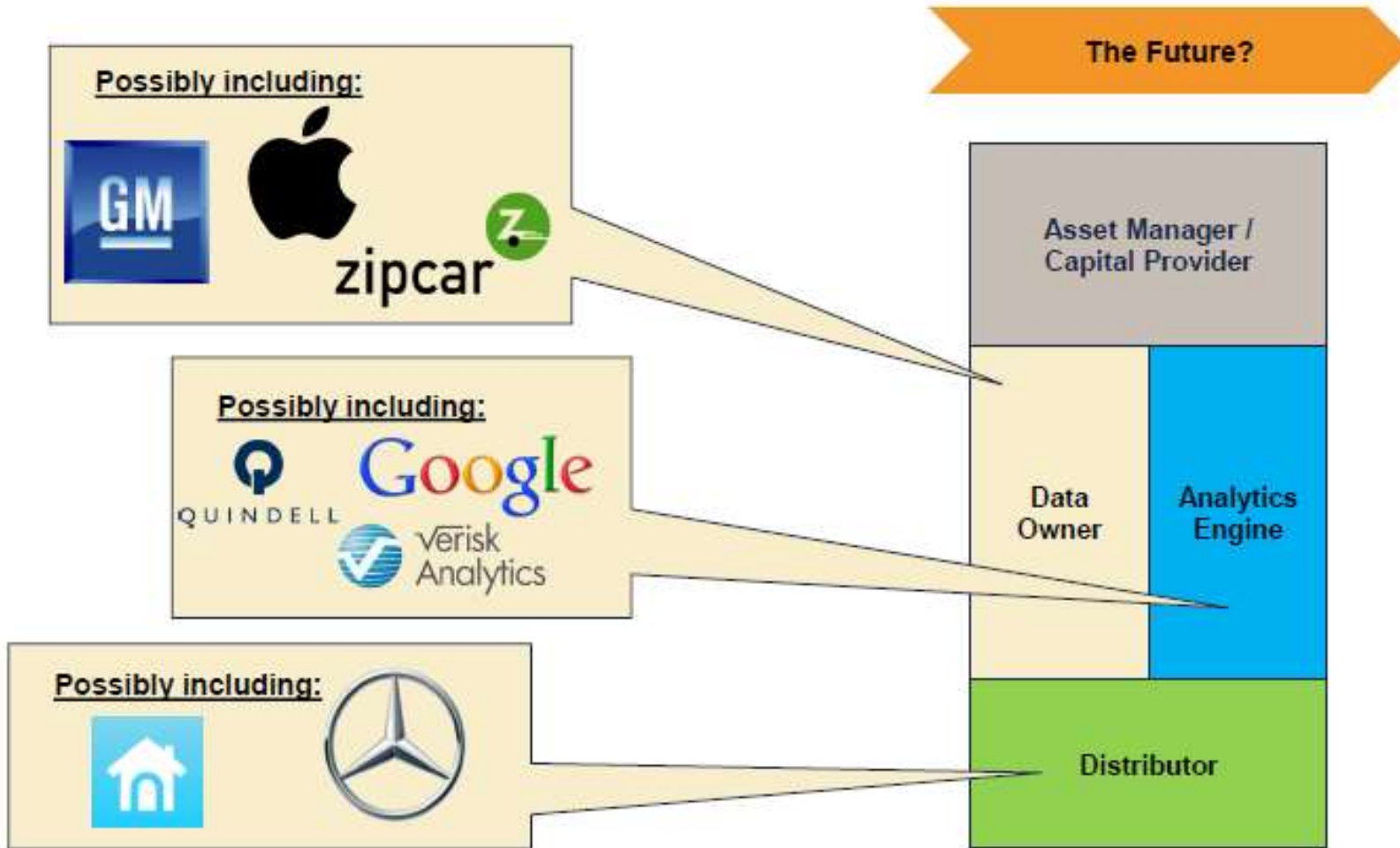
The Internet of Things and the Insurance Industry



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



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

The (Re)Insurance Value Chain

Where Could Disruption Lie?



Most Links in the Value Chain Have the Potential to Be Disrupted in Next 10 Years.



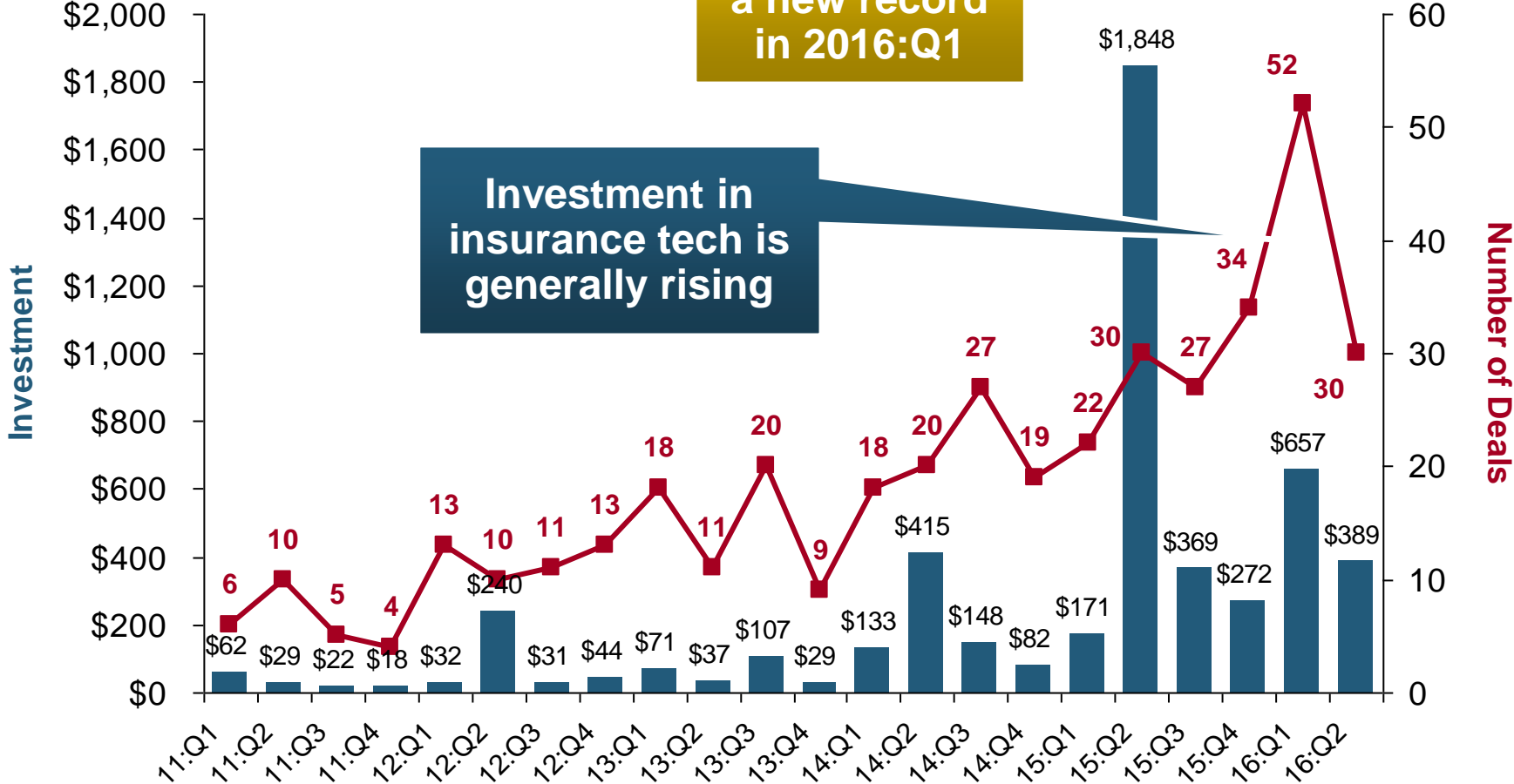
INSURANCE TECHNOLOGY: *FIN TECH ZEROES IN*

Number and Value of Deals Is Increasing

In Search of the Elusive Insurance 'Unicorn'

Insurance Technology Financing Trend: Change Is Coming

(\$ Millions)



Source: CB Insights at <https://www.cbinsights.com/blog/insurance-tech-overview-q1-2016/>; Insurance Information Institute.

The Internet

Will It Disrupt Marketing?

■ Lead Generators

- ◆ InsWeb, NetQuote, Insurance.com
- ◆ Site allows comparison shopping, sells lead to insurer

■ Call Center Agencies

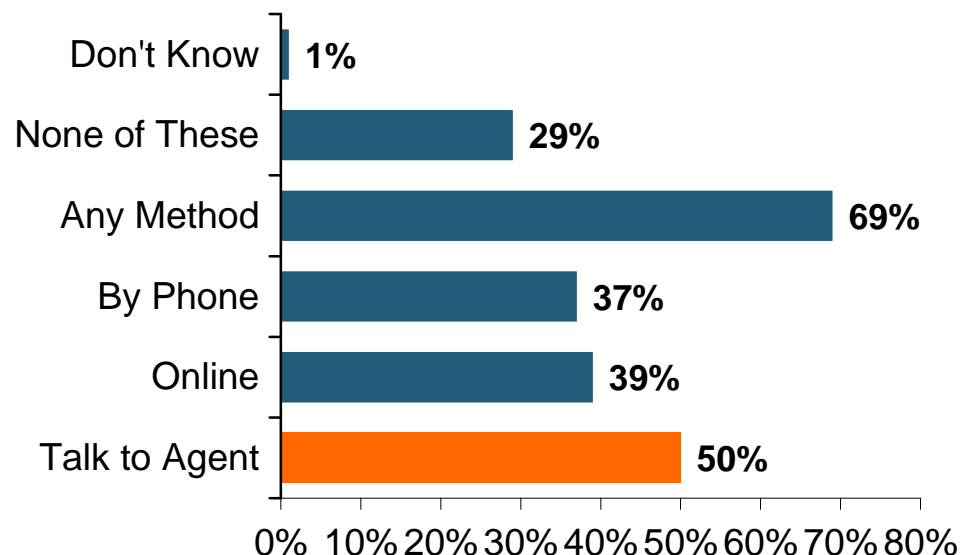
- ◆ SelectQuote, Goji
- ◆ Call center employs agents

■ Digital agencies

- ◆ Esurance, Policy Genius
- ◆ Quote and buy online

But Customers Still Like Agents

■ Did You Compare Prices When Your Auto Policy Was Up for Renewal?



Pricing Disruptor: The Fragmented Risk

- The Insurance Contract Is Being Split into Tiny Pieces.
 - ◆ By-peril HO insurance – Rate Water, Theft Liability Risk Separately
 - ◆ The Sharing/“On-Demand” Economy – Personal Exposures Become Commercial Exposures, Then Switch Back
 - ◆ Pay By Mile Insurance – Exposure Basis for Auto – Vehicle-Mile Replaces Vehicle-Year
- Expect More As
 - ◆ Computers Get Stronger
 - ◆ Data Storage Gets Cheaper
 - ◆ Information Collection Grows



metromile



The Internet of Things

- ▲ Gathering Big Data Affects
 - ◆ Underwriting
 - ◆ Pricing
 - ◆ Claims

- ▲ Monitoring Could Affect
 - ◆ Loss Control
 - ◆ Pricing?



Apple iWatch



fitbit

Swiss Re InsurTech Accelerator
 Disrupt the world of Re/Insurance. Come be a part of InsurTech Accelerator

The Insurers Investing in Internet of Things Startups

Insurer	Internet of Things Startup Investments

As For The Future...



IoT Could (Will) Disrupt UW, Claims, Loss Control

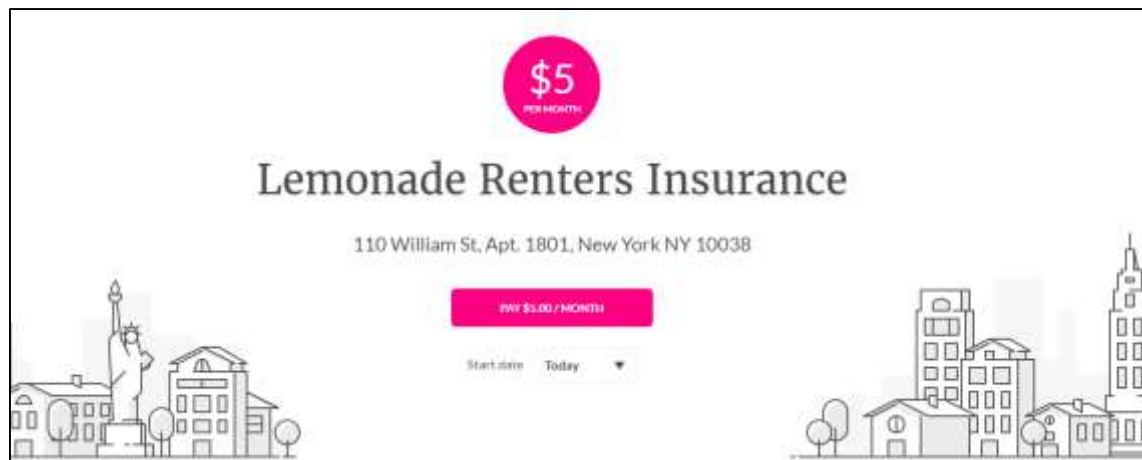


Peer-to-Peer (P2P) Insurance

Taking on the Entire Value Chain

The Business Model

- Resembles Mutuals/ Reciprocals
- 20% of Premium to Expenses, 80% to Cover Risk.
- Risk Pool for Each Charity
- Leftover Pool Money Goes to Charity.
- May Deter Fraud – You Wouldn't Cheat Your Favorite Charity!



Lemonade Chief Behavioral Officer

- Dan Ariely: “If you tried to create a system to bring out the worst in humans, it would look a lot like the insurance of today.”

Lemonade's P2P Model

Example: Renters' Insurance (HO-4)

- Attractive Graphics, Simple Explanations of a Basic ISO Form

What's Covered



FIRE AND SMOKE

A faulty Christmas light or your attempt at deep frying can cause some smoke and fire damage. We cover you for both.



BAD WEATHER

Wind, lightning, and hail are scary. You're covered for all of them. Flood insurance isn't part of the basic policy.



PROPERTY AND VALUABLES

If your stuff is stolen or damaged, this is the maximum amount you can claim. This includes basic coverage for jewelry, watches, and artwork. If you own luxury items, you might want to increase their coverage below. If you have family members living with you, we recommend setting \$10,000 per person.

\$10,000



LEGAL EXPENSES AND LIABILITY

If someone gets hurt on your property and decides to take legal action, this is the max amount we'll pay to cover legal expenses and medical costs.

\$100,000

Coverage Amounts



PROPERTY AND VALUABLES

If your stuff is stolen or damaged, this is the maximum amount you can claim. This includes basic coverage for jewelry, watches, and artwork. If you own luxury items, you might want to increase their coverage below. If you have family members living with you, we recommend setting \$10,000 per person.

\$10,000



LEGAL EXPENSES AND LIABILITY

If someone gets hurt on your property and decides to take legal action, this is the max amount we'll pay to cover legal expenses and medical costs.

\$100,000

HOMEOWNERS
HO 00 04 05 11

HOMEOWNERS 4 – CONTENTS BROAD FORM

AGREEMENT

We will provide the insurance described in this policy in return for the premium and compliance with all applicable provisions of this policy.

DEFINITIONS

A. In this policy, "you" and "your" refer to the "named insured" shown in the Declarations and the spouse if a resident of the same household. "We", "us" and "our" refer to the Company providing this insurance.

2. "Bodily injury" means bodily harm, sickness or disease, including required care, loss of services and death that results.

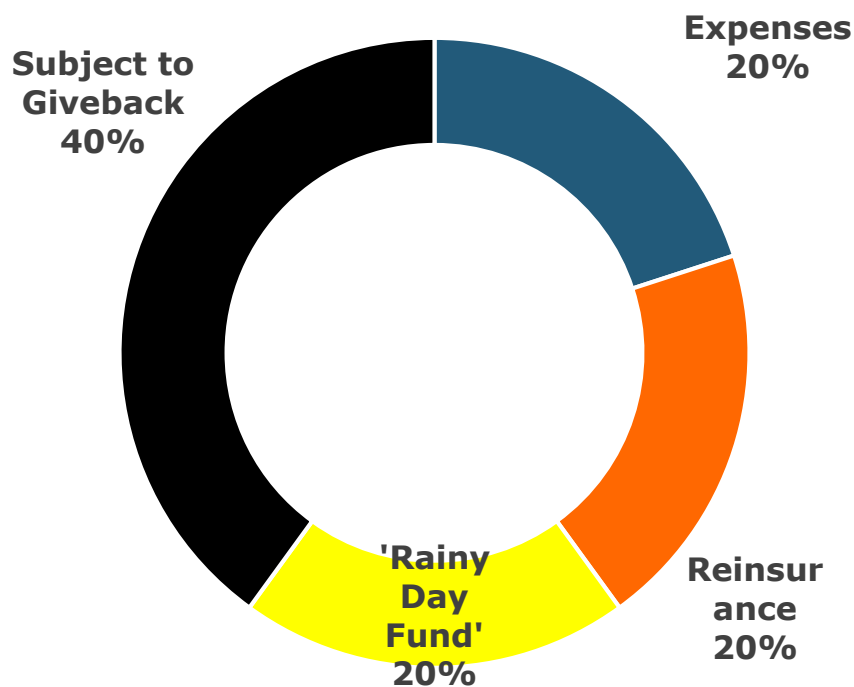
3. "Business" means:

- a.** A trade, profession or occupation engaged in on a full-time, part-time or occasional basis; or
- b.** Any other activity engaged in for money or other compensation, except the following:
 - (1)** One or more activities not described in

Lemonade's P2P Model

Questions...

Who Holds the Risk?



Other Questions

- How Are Charitable Pools Separated?
- Who Gets the Float?
 - ◆ Insurer, Reinsurer or Charity?
- Who Gets the Tax Deduction (Worth More Than the Float)?
- The Giveback Occurs on June 20 – 4 Equal Payments Over 4 Years – (Active Policies Only)

Insurance Information Institute Online:

www.iii.org

*Thank you for your time
and your attention!*

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