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# The Property/Casualty Landscape Profitability, Growth – Disruption?

Casualty Actuaries of the Southeast, Atlanta, September 26, 2016

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

James Lynch, FCAS MAAA, Chief Actuary

Insurance Information Institute ♦ 110 William Street ♦ New York, NY 10038  
Tel: 212.346.5533 ♦ [jamesl@iii.org](mailto:jamesl@iii.org) ♦ [www.iii.org](http://www.iii.org)

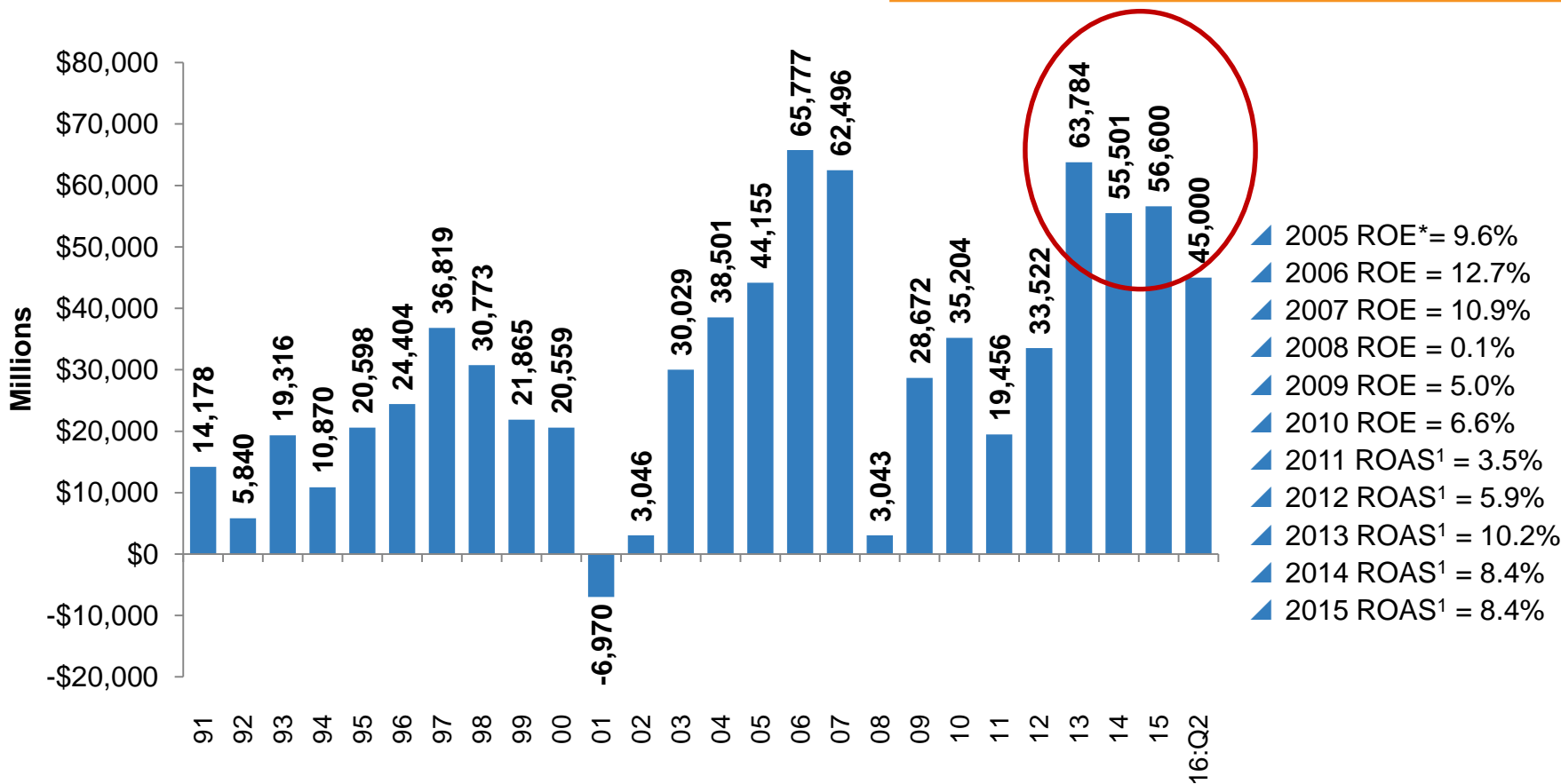
# Insurance Industry: Financial Update & Outlook

2015 Was a Reasonably Good Year  
and Similar to 2014

2016: Smarting from Catastrophes

# P/C Industry Net Income After Taxes 1991-2016:Q2 (preliminary)

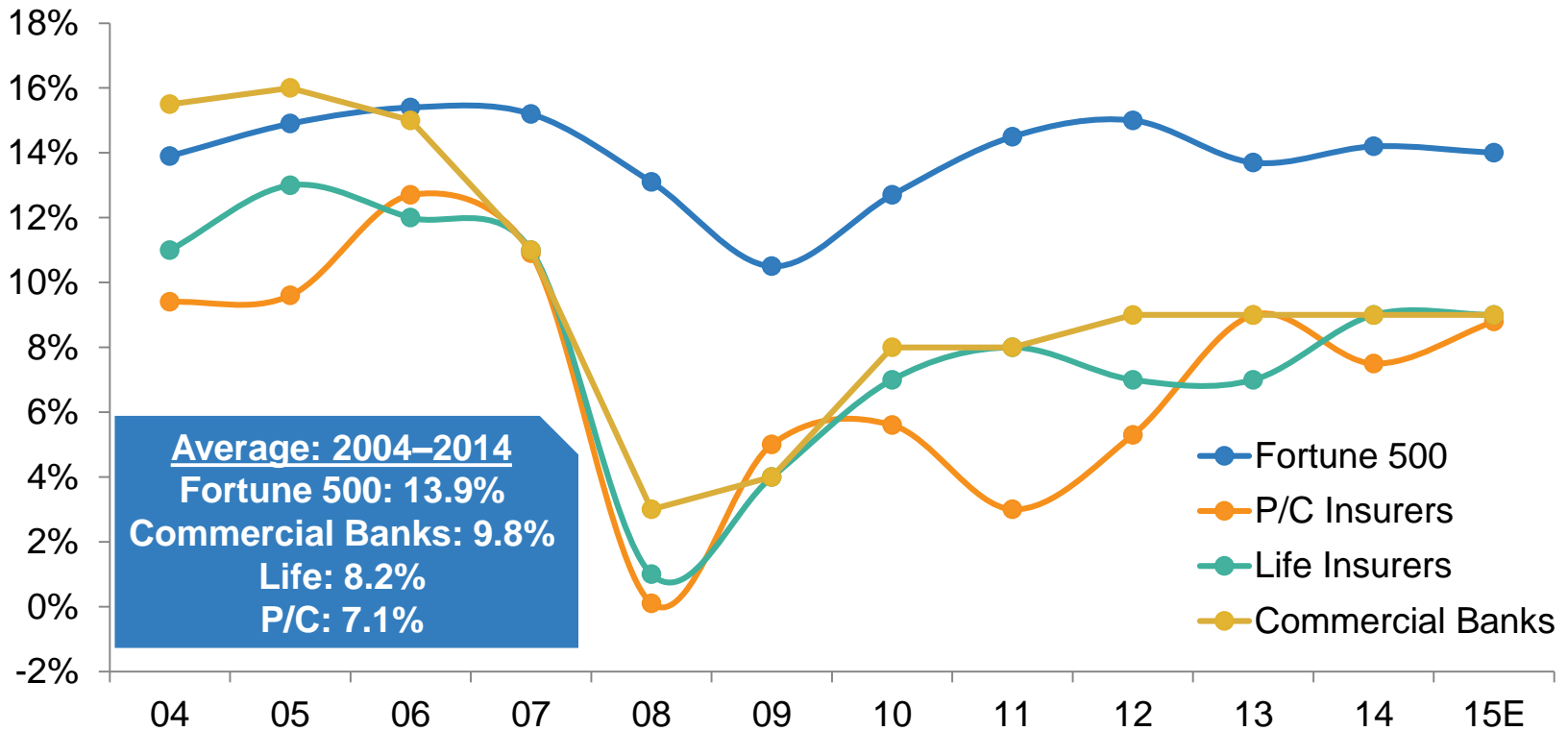
Profits Are 28 Percent Below Last Year Through Two Quarters. Little Cats, Weak Auto Results



\*ROE figures are GAAP; <sup>1</sup>Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 8.2% ROAS in 2014, 9.8% ROAS in 2013, 6.2% ROAS in 2012, 4.7% ROAS for 2011, 7.6% for 2010 and 7.4% for 2009. 2016:Q2 is annualized  
Sources: A.M. Best; ISO, a Verisk Analytics company; Insurance Information Institute.



# Return on Equity by Financial Services Sector vs. Fortune 500, 2004-2015\*



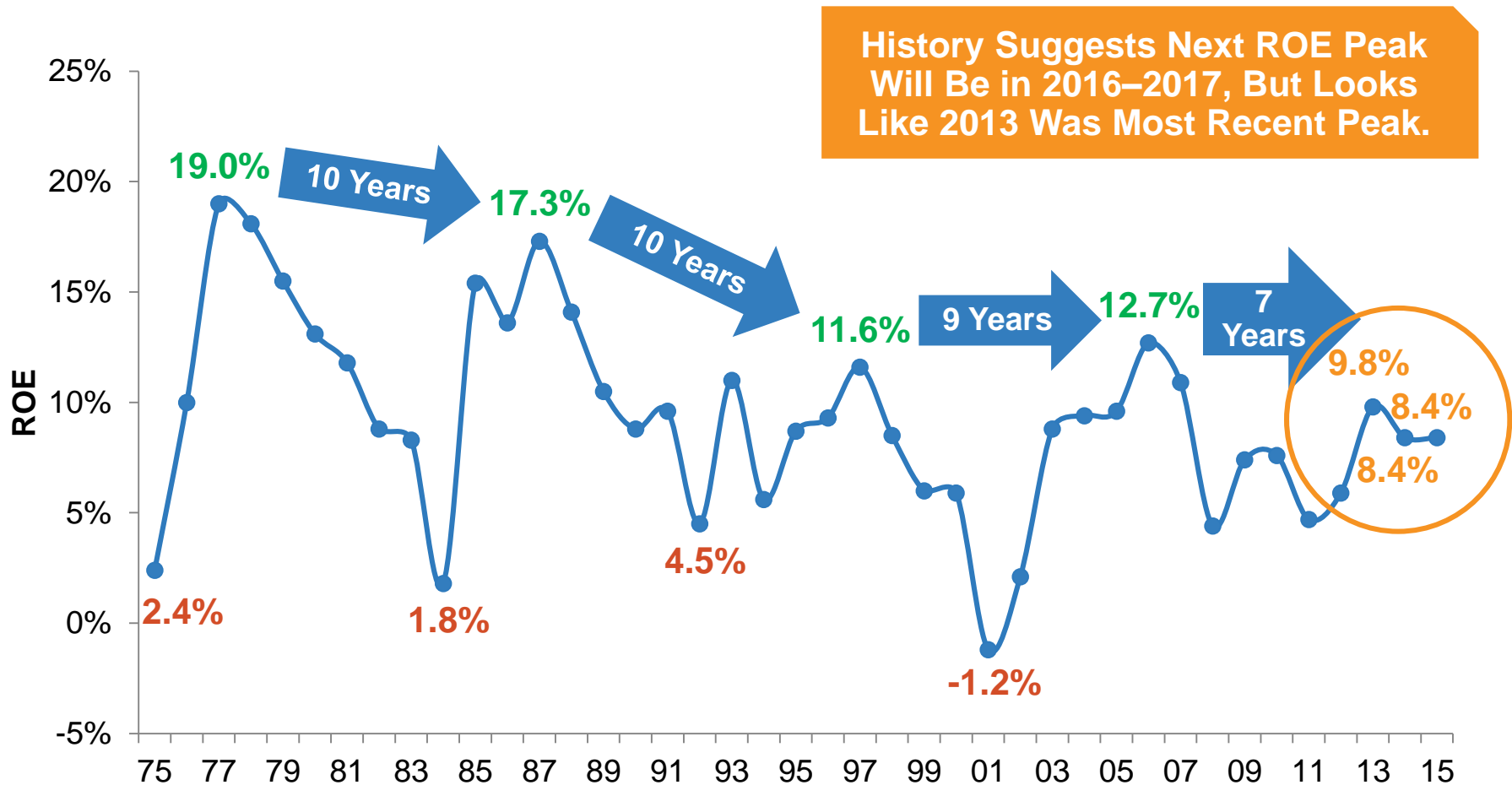
**Banks and Insurers Have Substantially Underperformed the Fortune 500 Since the Financial Crisis.**



\*GAAP basis.

Sources: ISO, a Verisk Analytics company; Fortune; Insurance Information Institute.

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



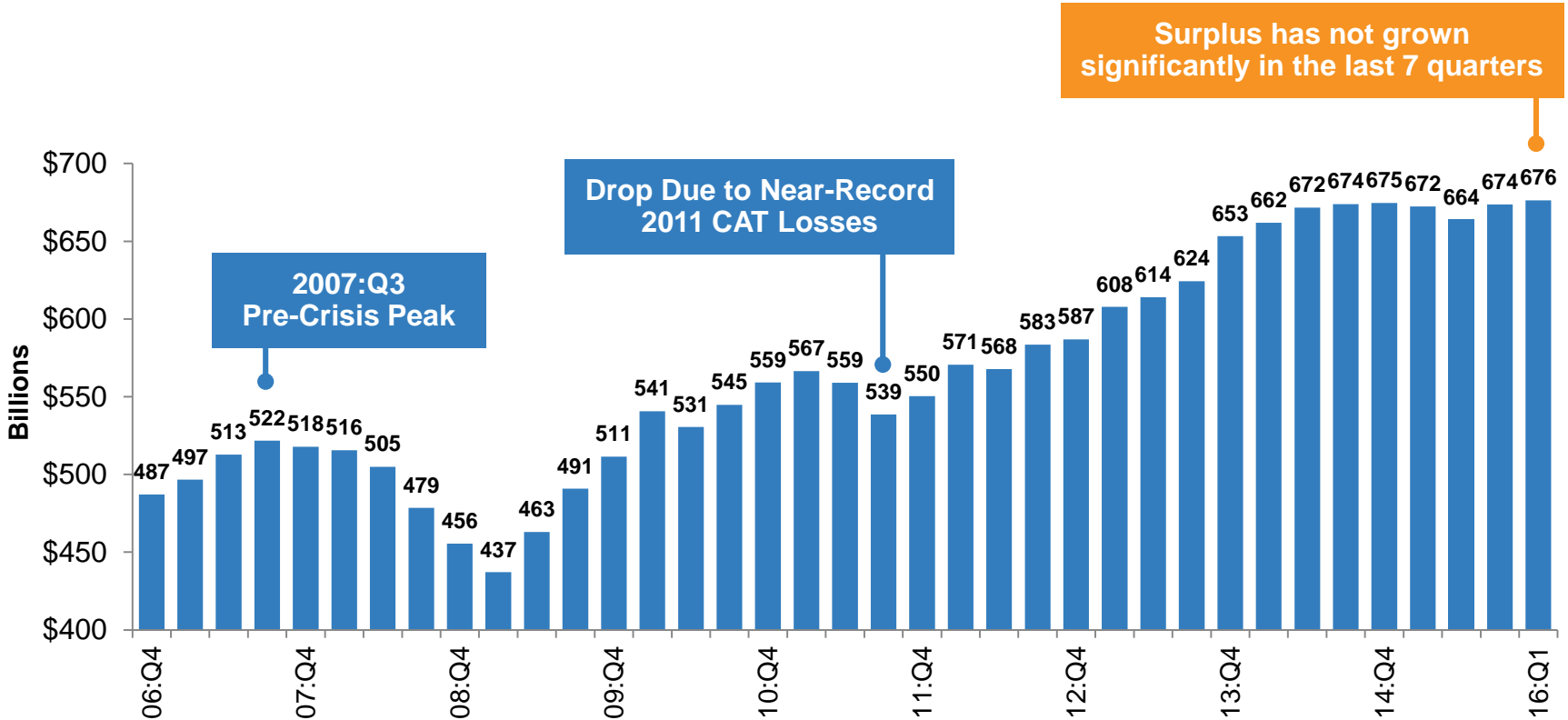
\*Profitability = P/C insurer ROEs. 2011-14 figures are estimates based on ROAS data.

Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers.

Sources: Insurance Information Institute; Natl. Assoc. of Insurance Comm.; ISO, a Verisk Analytics company; A.M. Best, Conning.



# Policyholder Surplus, 2006:Q4-2016:Q1



**The Industry Now Has \$1 of Surplus for Every \$0.75 of NPW, Close to the Strongest Claims-paying Status in its History.**

**The P/C Insurance Industry Entered 2016 in Very Strong Financial Condition.**



2010:Q1 data includes \$22.5B of paid-in capital from a holding company parent for one insurer's investment in a non-insurance business. Sources: ISO, a Verisk Analytics company; A.M. Best.

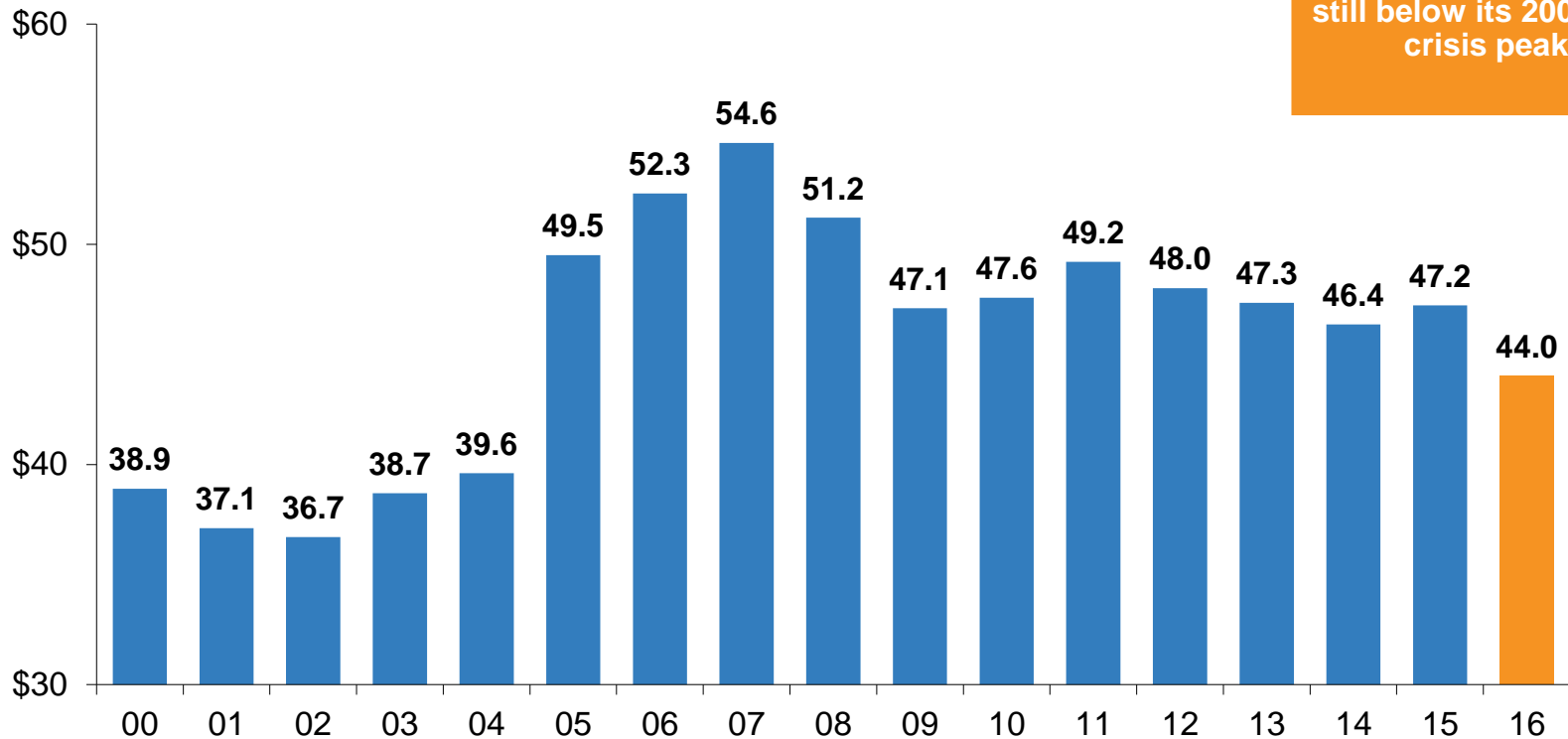
# Investments: The New [Grim] Reality

Investment Performance is a  
Key Driver of Profitability

Depressed Yields Will Necessarily  
Influence Underwriting & Pricing

# Property/Casualty Insurance Industry Investment Income: 2000–2016<sup>1</sup>

(Billions)



Investment income is still below its 2007 pre-crisis peak

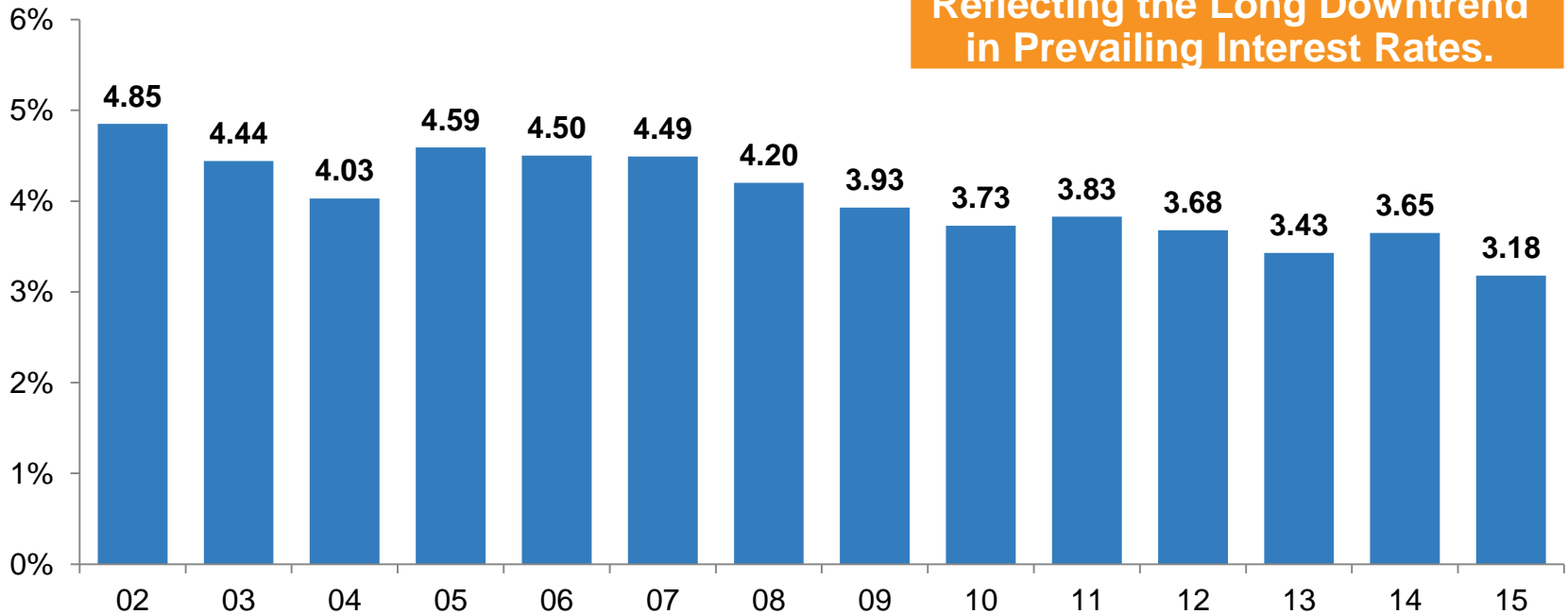
Due to persistently low interest rates, investment income continues to fall.

 <sup>1</sup> Investment gains consist primarily of interest and stock dividends. 2016 is I.I.I. estimate based on A.M. Best data. Sources: ISO. A.M. Best, Insurance Information Institute.



# P/C Insurer Portfolio Yields, 2002-2015

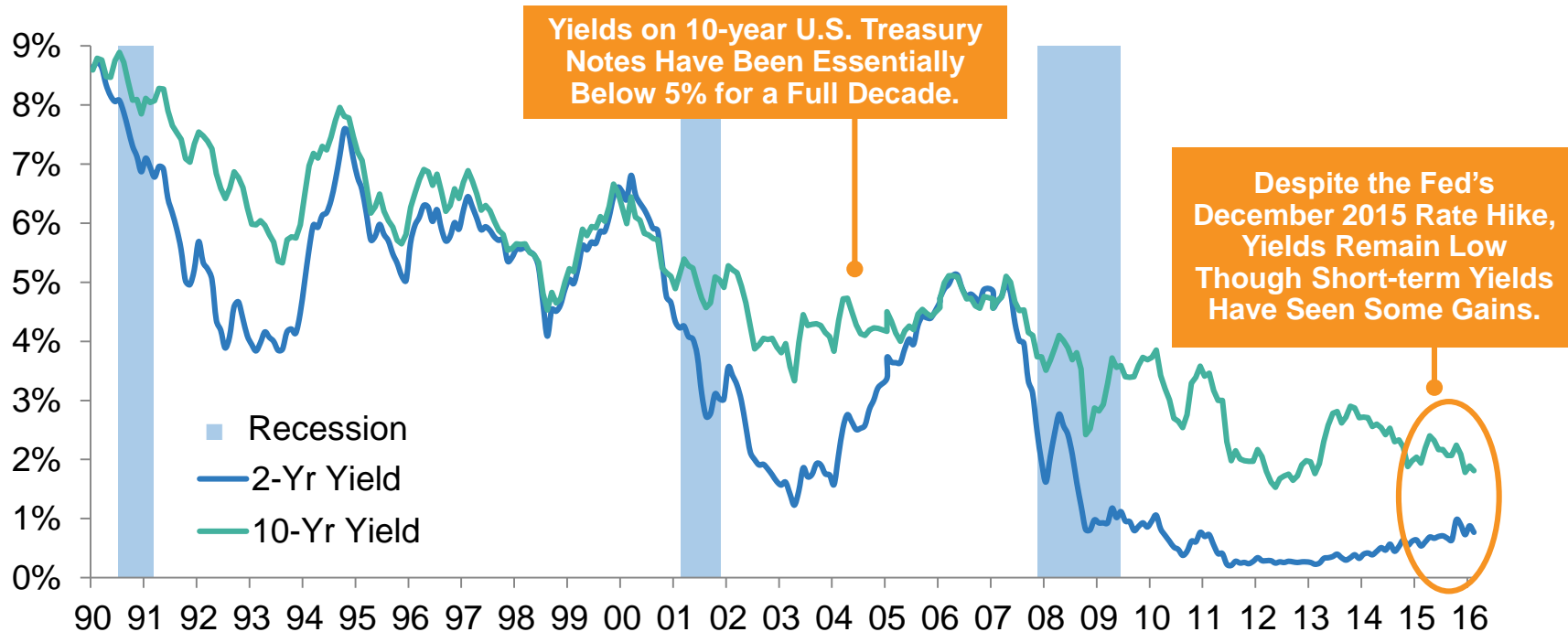
**P/C Carrier Yields Have Been Falling for Over a Decade, Reflecting the Long Downtrend in Prevailing Interest Rates.**



**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.**



# U.S. Treasury Security Yields: A Long Downward Trend, 1990-2016\*



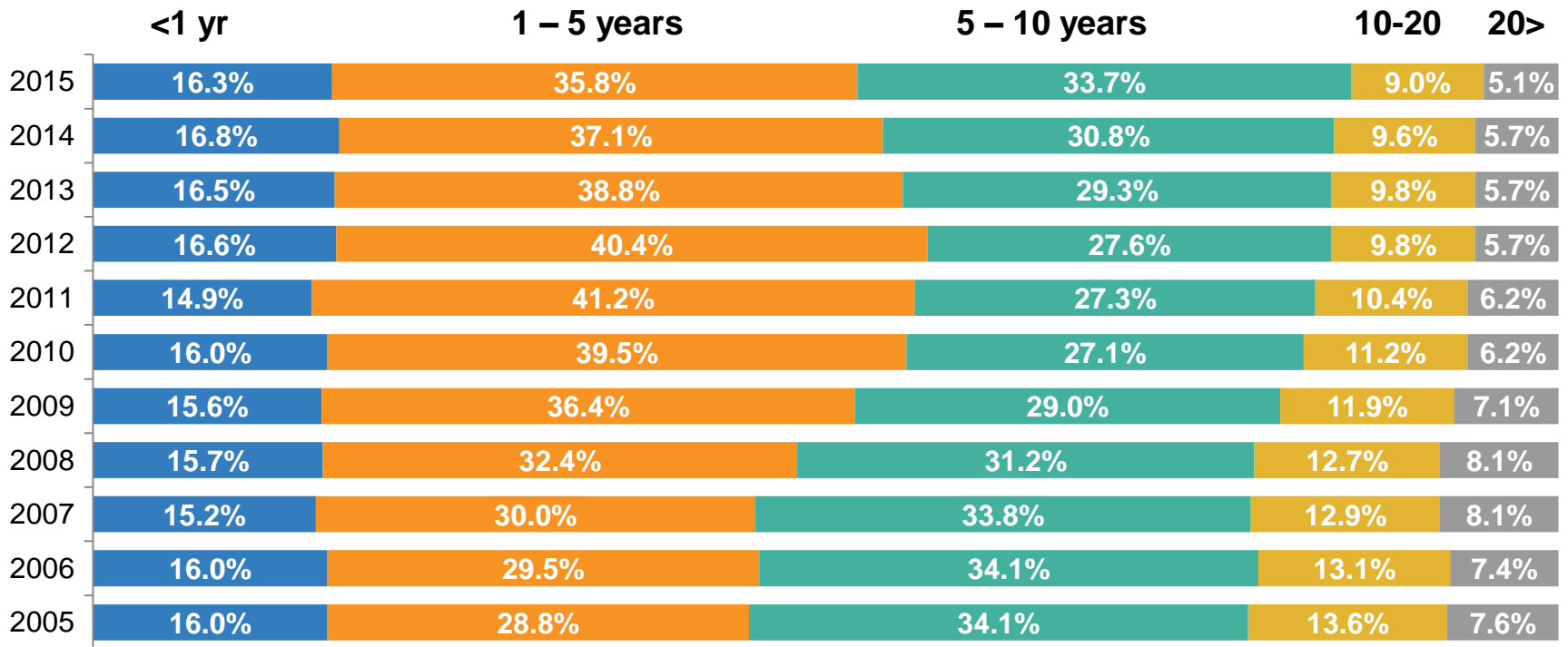
**Bonds constitute slightly more than 2/3 of P/C industry investments. Roughly 36% of P/C bonds are in 1-5-year durations, so they will respond to rising interest rates in just a few years. But nearly half of the bond portfolio is in 5-year or longer durations, which will take longer to rise.**

\*Monthly, constant maturity, nominal rates, through April 2016.

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



# Distribution of Bond Maturities, P/C Insurance Industry, 2005-2015

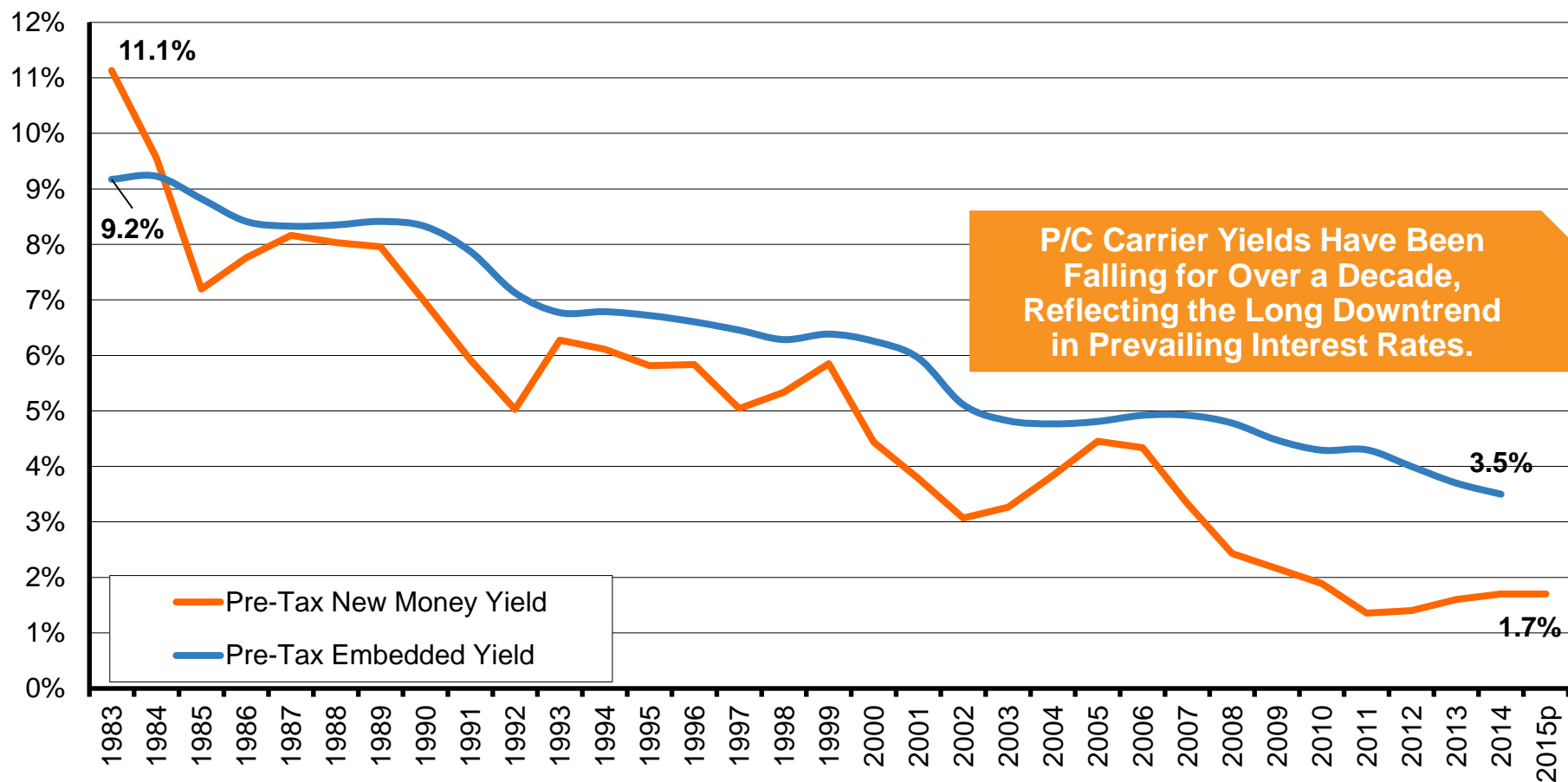


**Two main shifts over these years:**  
**From 2007 to 2011-12, from bonds with longer maturities to bonds with shorter maturities.**  
**But beginning in 2013, the reverse.**  
**Note, however, that the percentages in bonds with maturities over 10 years continues to drop.**



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

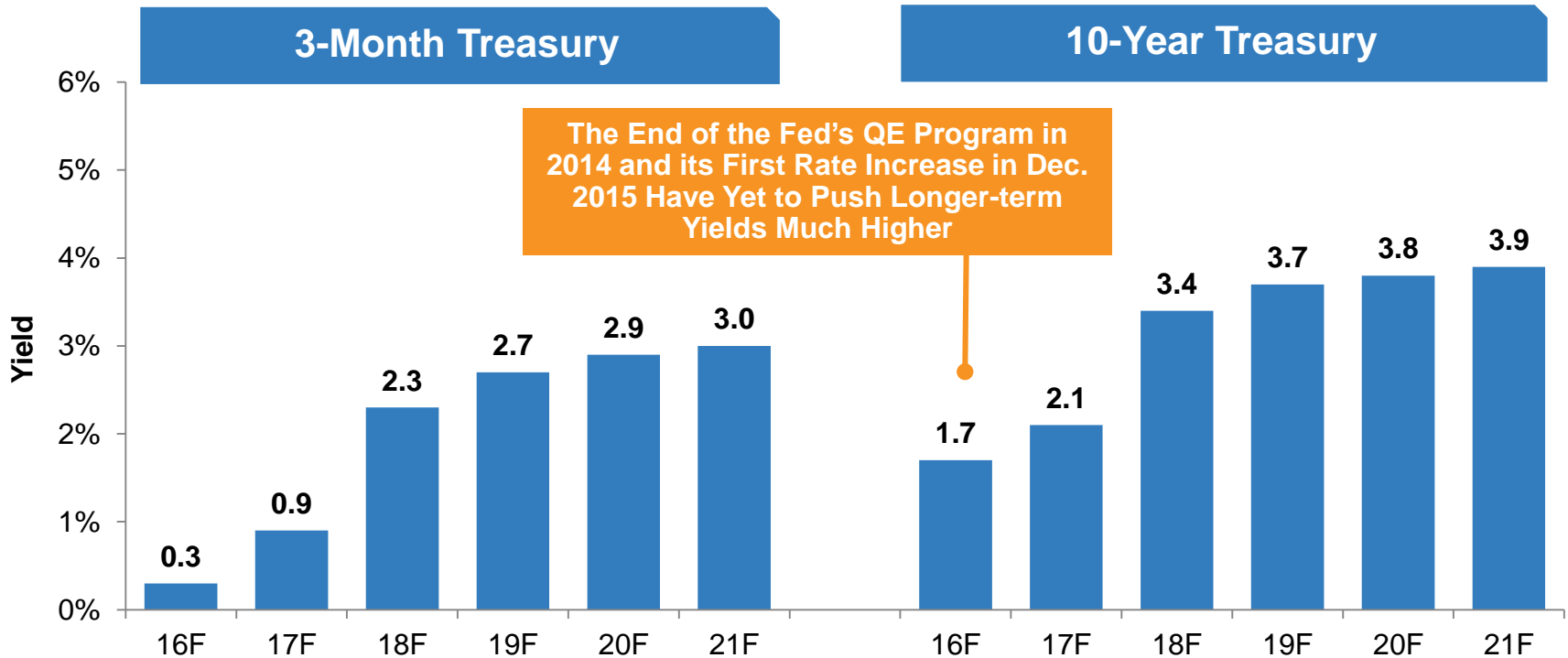
# New Money vs. Embedded Yields, U.S. Insurers, 1983-2012



**As long as new money rates are below the rates of maturing bonds, the portfolio yield will continue to sink.**



# Interest Rate Forecasts: 2016-2021

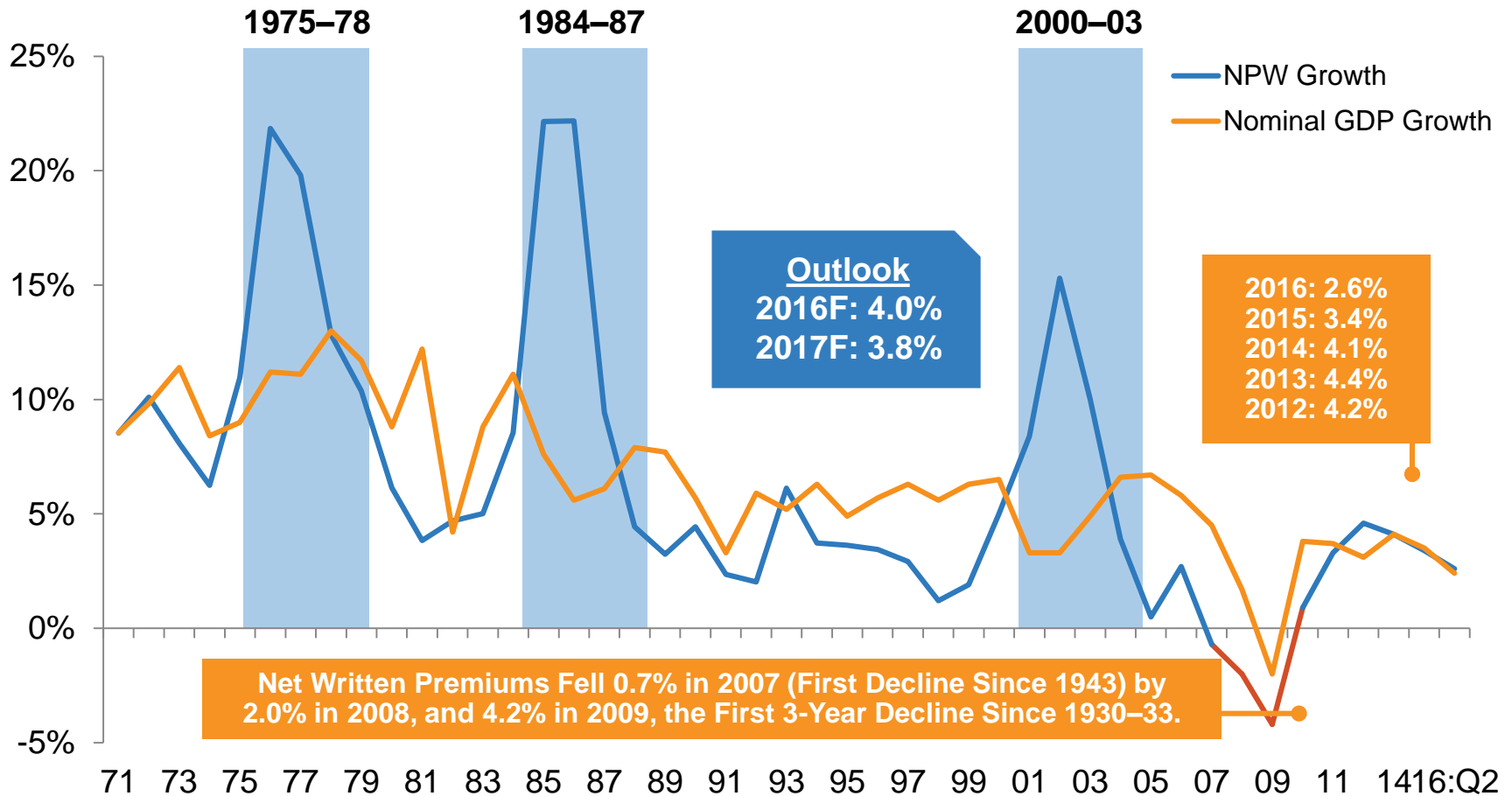


**A “Normalization” of Interest Rates is Unlikely Until 2019, More than a Decade After the Onset of the Financial Crisis. Note how flat the Yield Curve is Expected to be.**



# Underwriting Performance

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



Shaded areas denote "hard market" periods

Sources: FRED Economic Data for GDP; A.M. Best (1971-2013), ISO (2014-15); NAIC data sourced from S&P Global Market Intelligence for 2016:Q2, Insurance Information Institute calculations.



# P/C Direct Written Premium by Line

(Billions of Dollars)

LOB	2016	2015	% Chg From Year Earlier
Personal Auto Liab	62.5	59.1	5.8%
Homeowners	46.4	45.3	2.3%
PhysDam (PA, CA)	46.4	43.4	7.1%
GL (incl Products)	32.9	32.1	2.4%
WC	29.5	28.8	2.5%
Fire & Allied Lines	17.3	18.3	-5.5%
CMP	20.2	20.1	0.5%
Comm Auto Liab	12.8	12.3	4.2%
Other	32.9	32.4	1.5%
<b>Total</b>	<b>300.9</b>	<b>291.8</b>	<b>3.1%</b>

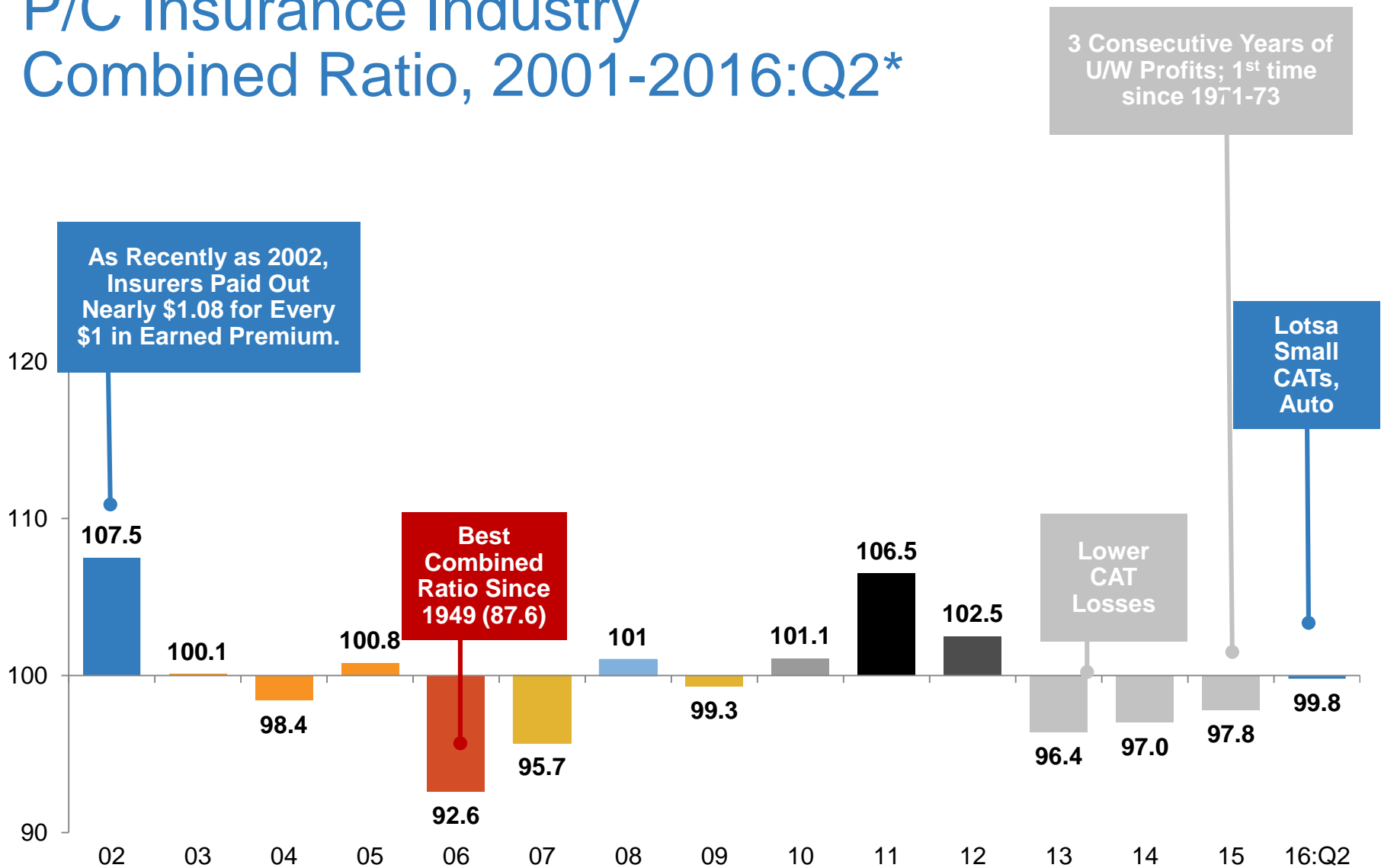


Through Q2

Sources: NAIC data from S&P Global Intelligence, Insurance Information Institute.



# P/C Insurance Industry Combined Ratio, 2001-2016:Q2\*



Q2 2016 Estimate is Preliminary

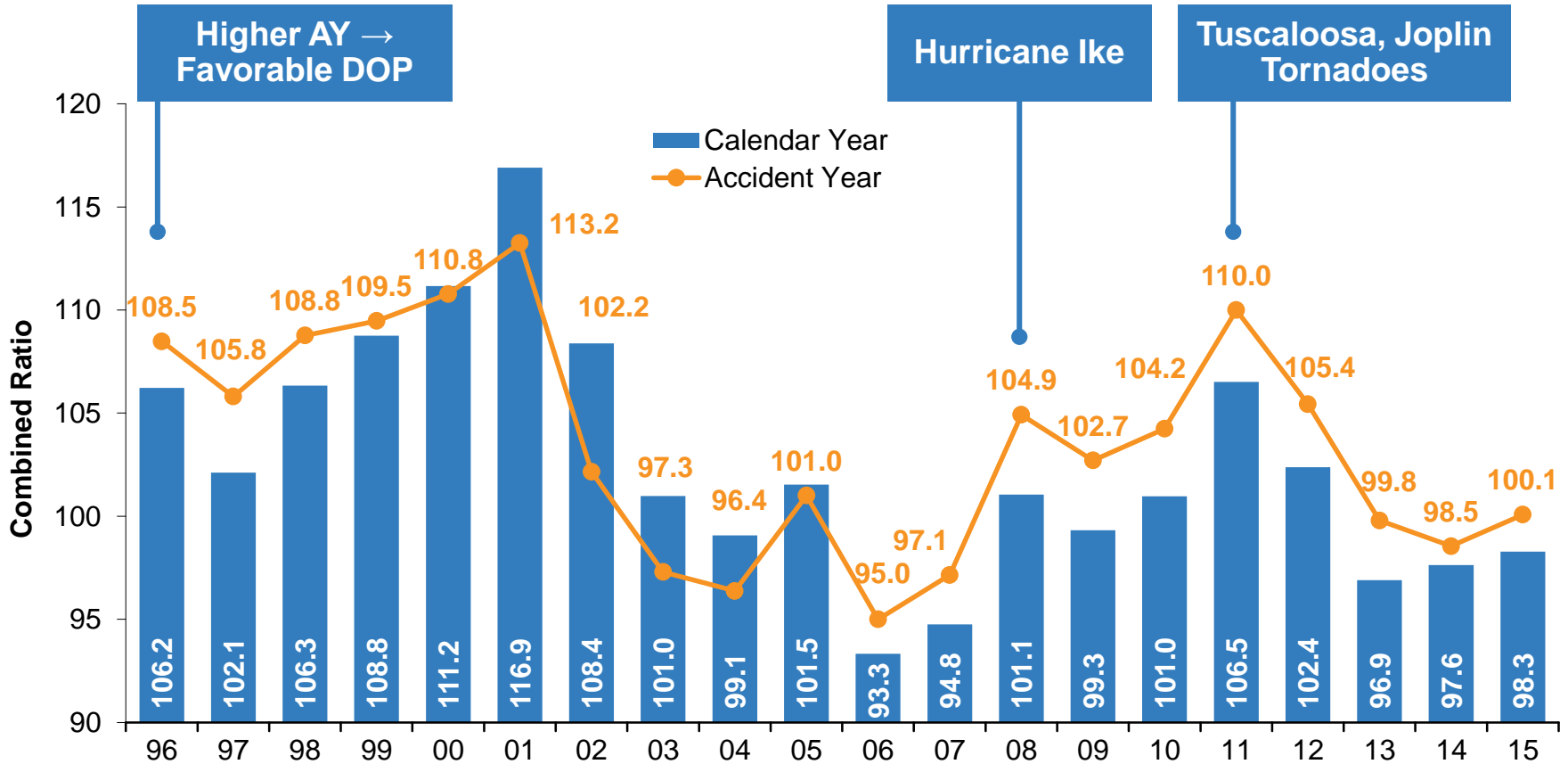
\*Excludes Mortgage & Financial Guaranty insurers 2008-2014.

Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2; 2013: = 96.1; 2014: = 97.0.

Sources: A.M. Best; ISO, a Verisk Analytics company; 2010-2014 is from A.M. Best P&C Review and Preview, February 16, 2016; 2015 from I.I.I./PCI/ISO; 2016 Estimate from I.I.I. based on S&P Global Market Intelligence data.



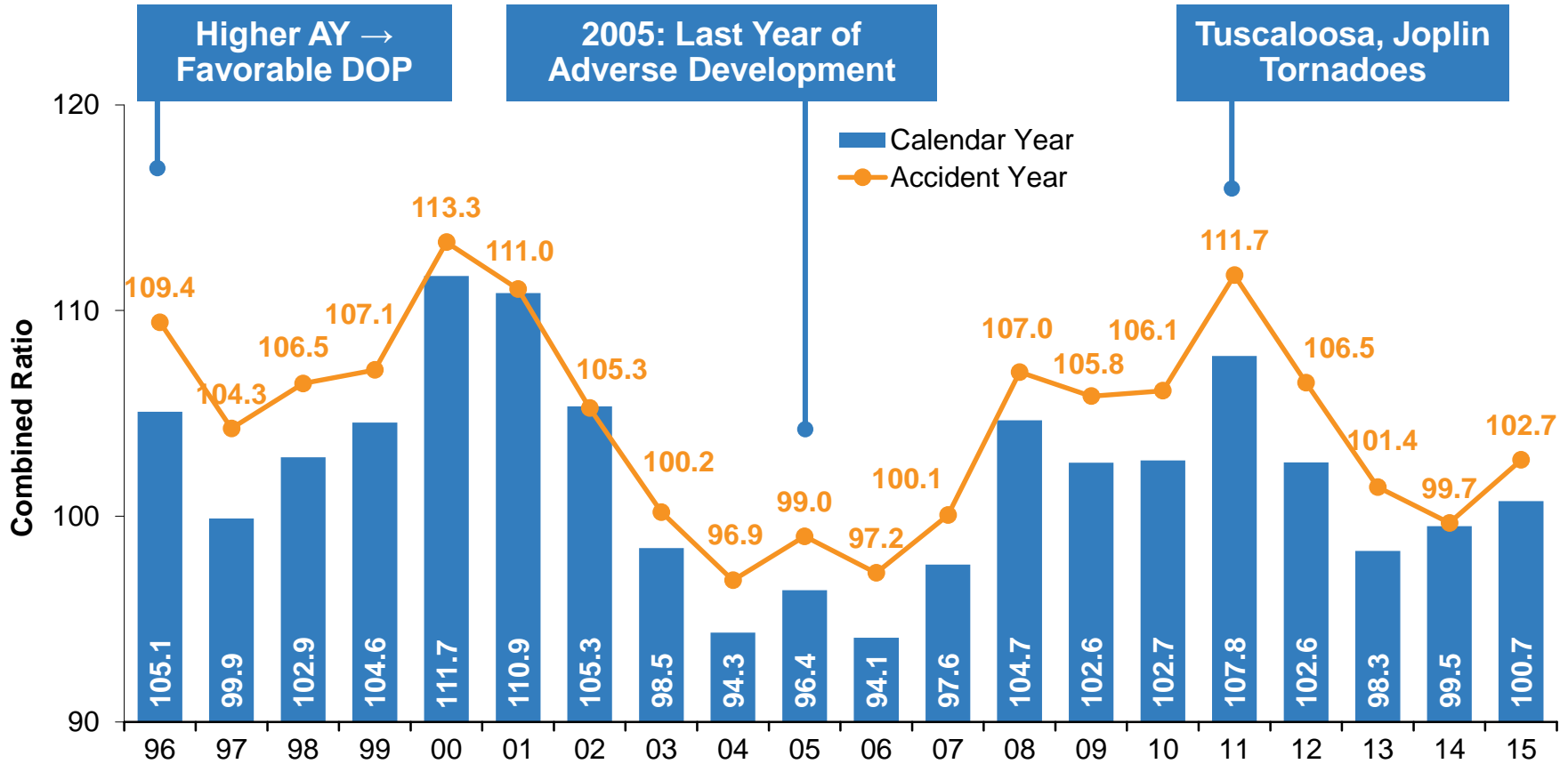
# AY vs. CY Combined Ratio, (Excl. Guaranty Lines) 1996-2015



**Three Consecutive Years of Deteriorating Combined Ratios, Despite Light Cat Losses. AY2015 Above 100.**



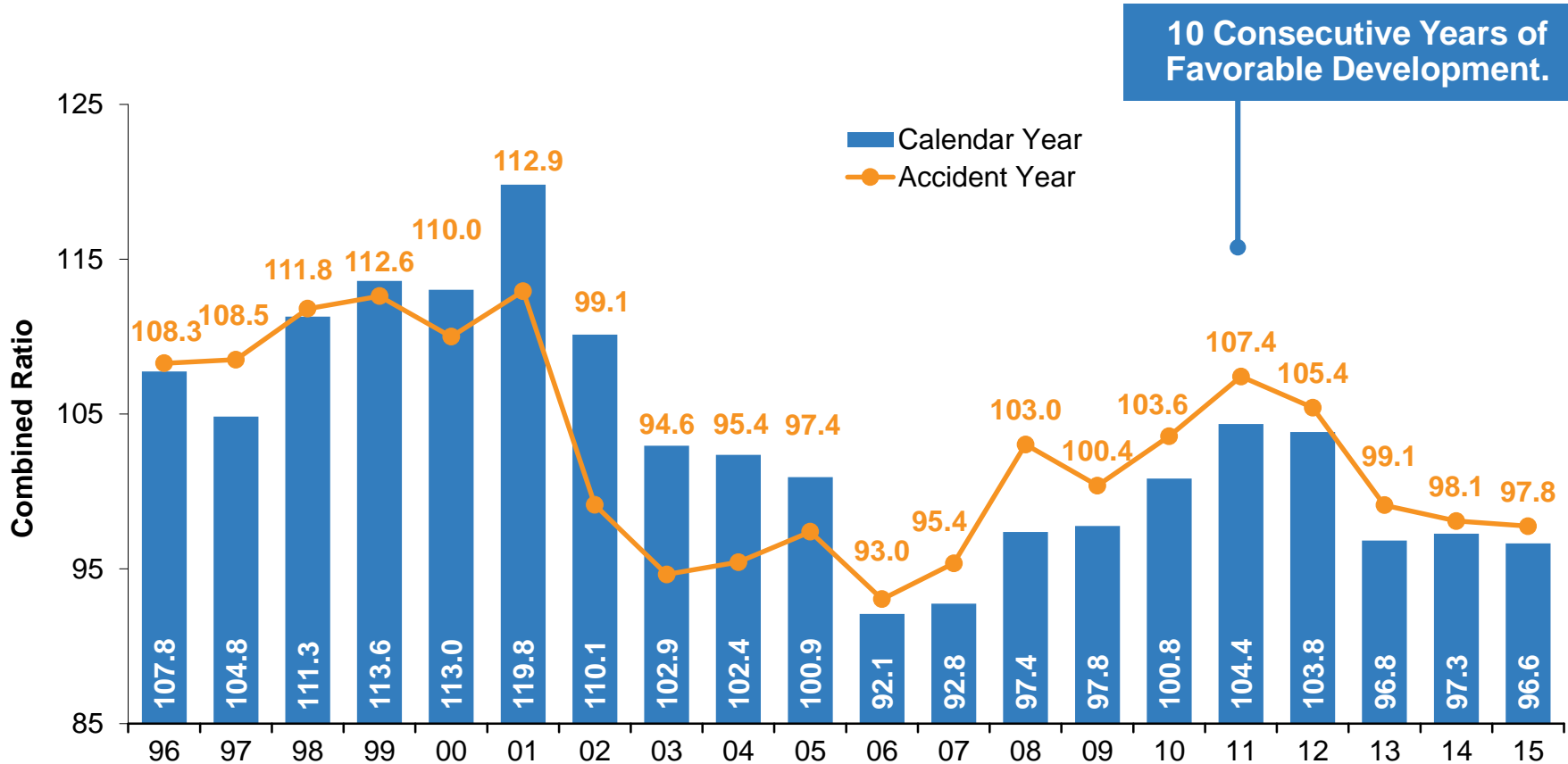
# Personal Lines Combined Ratio, 1996-2015



**Lack of Catastrophes Let Personal Lines Writers Post Underwriting Profit Two Years In a Row. CY15 > 100, Despite Lack of Cats.**



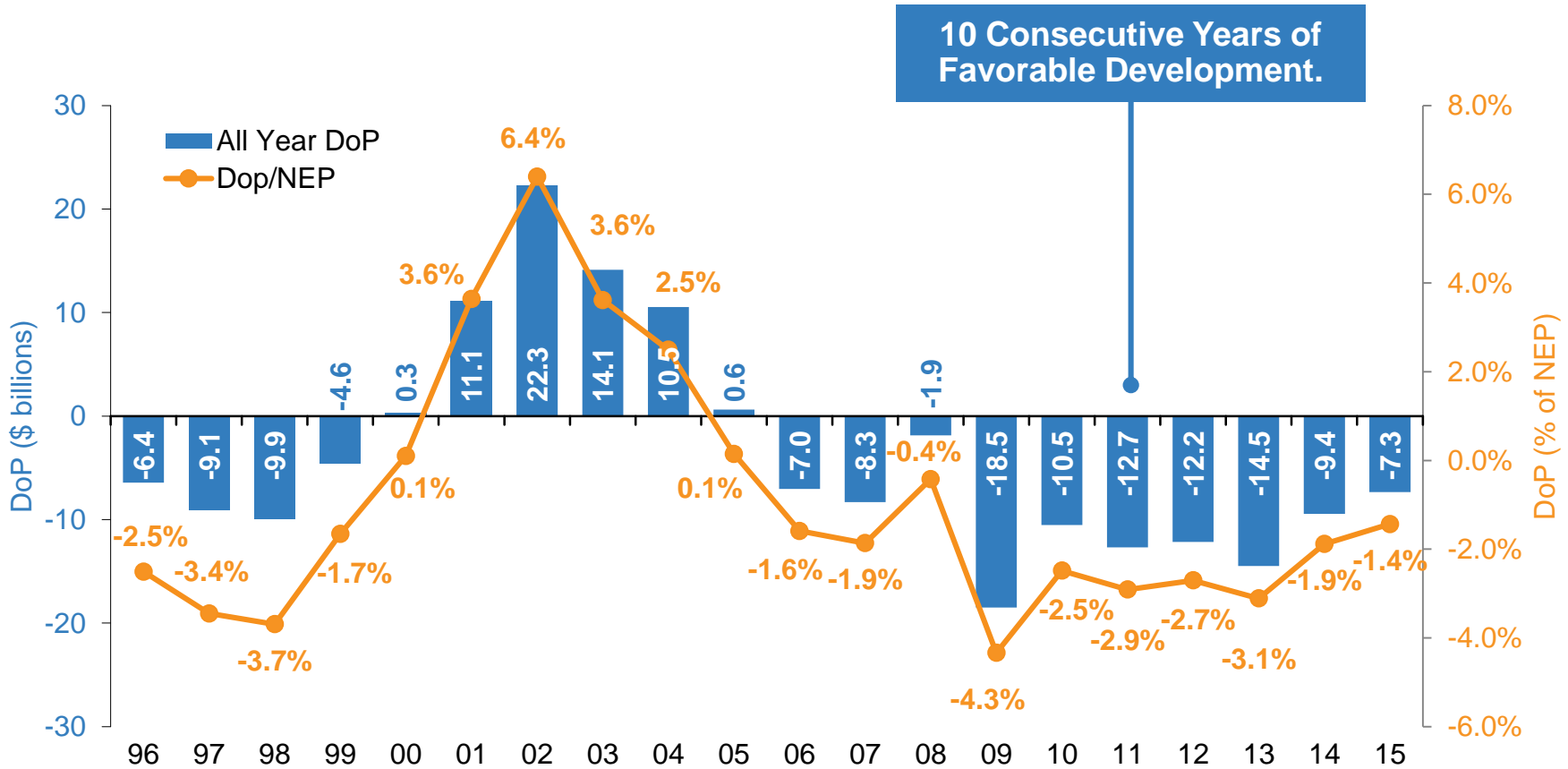
# Commercial Lines Combined Ratio, 1996-2015



**Low Cat Losses Contribute to Favorable Combined Ratios.**



# Development on Prior, 1996-2015

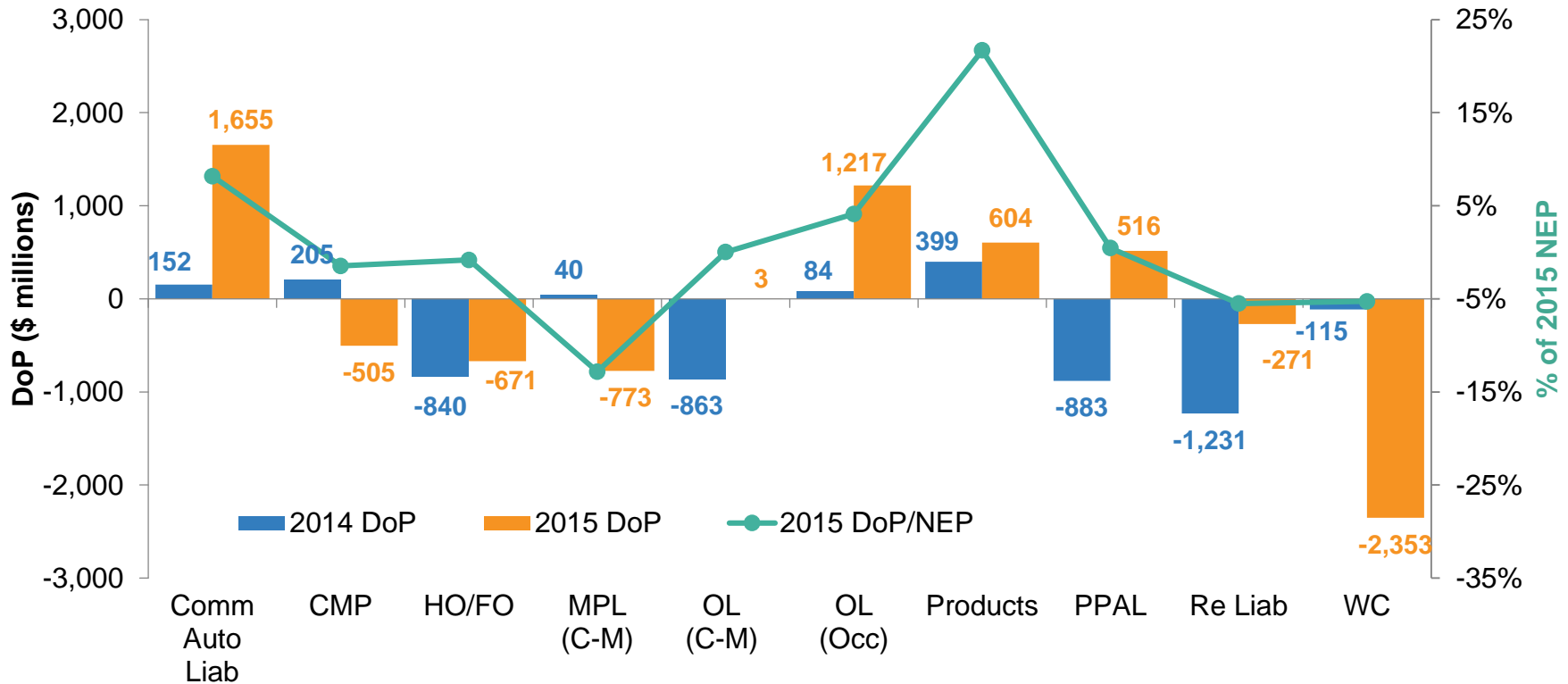


10 Consecutive Years of Favorable Development.

**Reserve Releases Keep Getting Smaller.  
2015 Affected by a Single Company's \$3B Reserve Hit.**



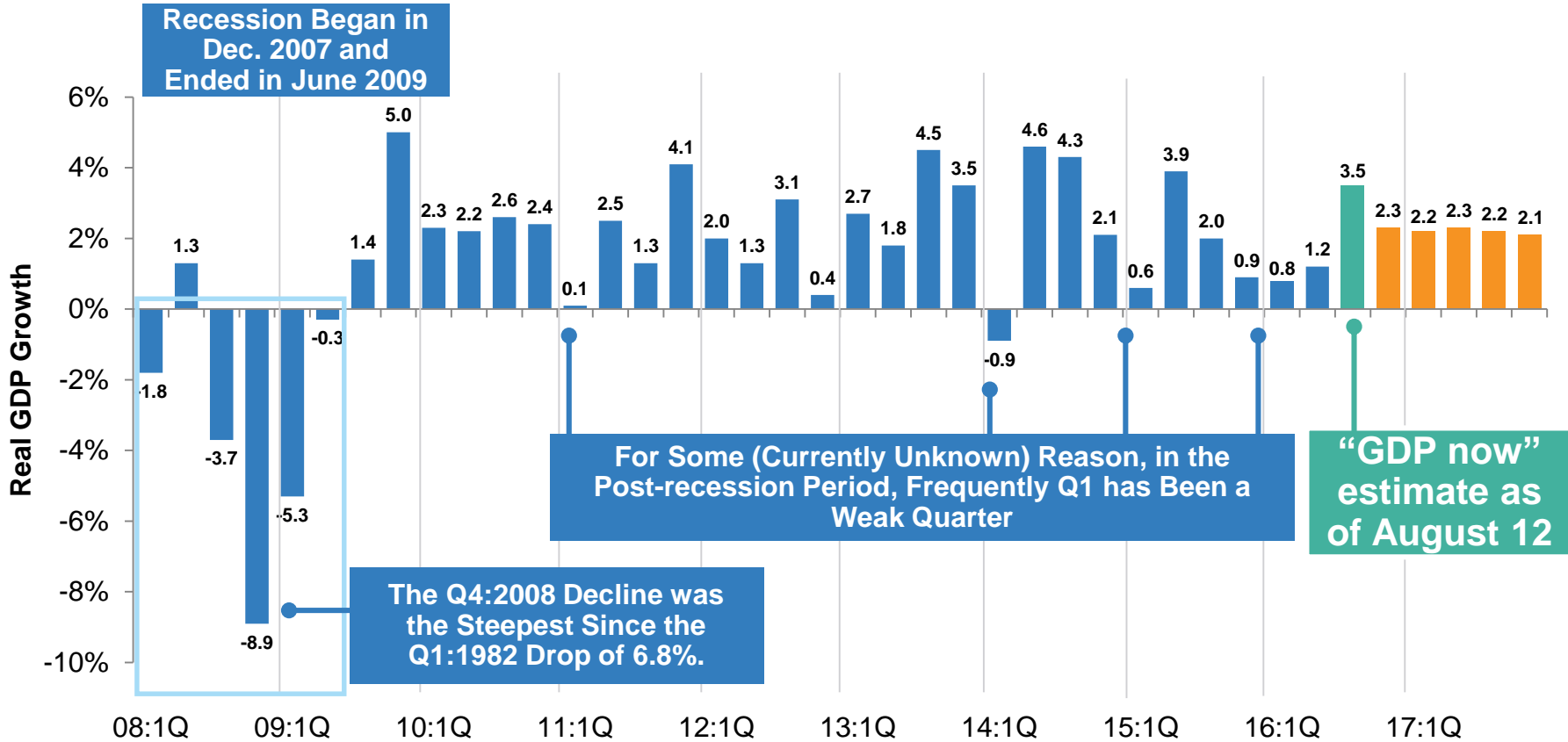
# CY Development on Prior by LOB



**Several Liability Lines (Auto, GL, Products) Had Reserve Spikes. WC Was an Exception.**



# U.S. Real GDP Growth,\* Quarterly



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



\*Estimates/Forecasts (gold bars) from Blue Chip Economic Indicators.  
Sources: U.S. Department of Commerce, Blue Chip Economic Indicators 8/10; Insurance Information Institute.

# P/C Direct Incurred Loss Ratio by LOB

LOB	2016	2015	Chg From Year Earlier
Personal Auto Liab	72	68	4
Homeowners	56	55	1
PhysDam (PA, CA)	67	64	3
GL (incl Products)	52	51	1
WC	54	59	(5)
Fire & Allied Lines	56	55	1
CMP	51	48	3
Comm Auto Liab	64	62	3
Other	44	42	2
<b>Total</b>	<b>59</b>	<b>57</b>	<b>2</b>

**Positive Number =  
Bad News**



Through Q2

Sources: NAIC data from S&P Global Intelligence, Insurance Information Institute.

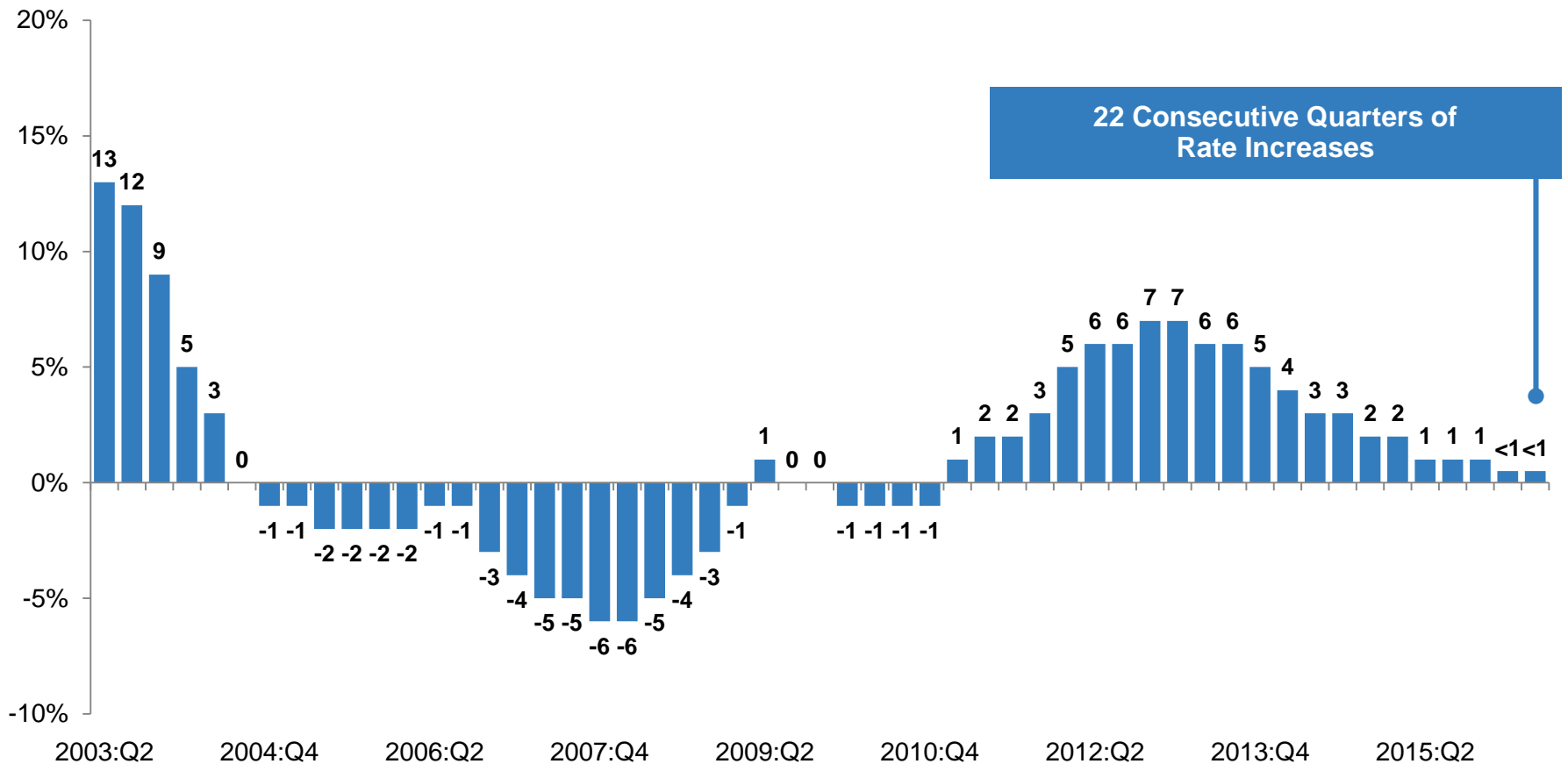


# Commercial Rates\*

Steady Going

*\*These Publicly Available Estimates May Differ Substantially  
From Events In Individual States and Markets*

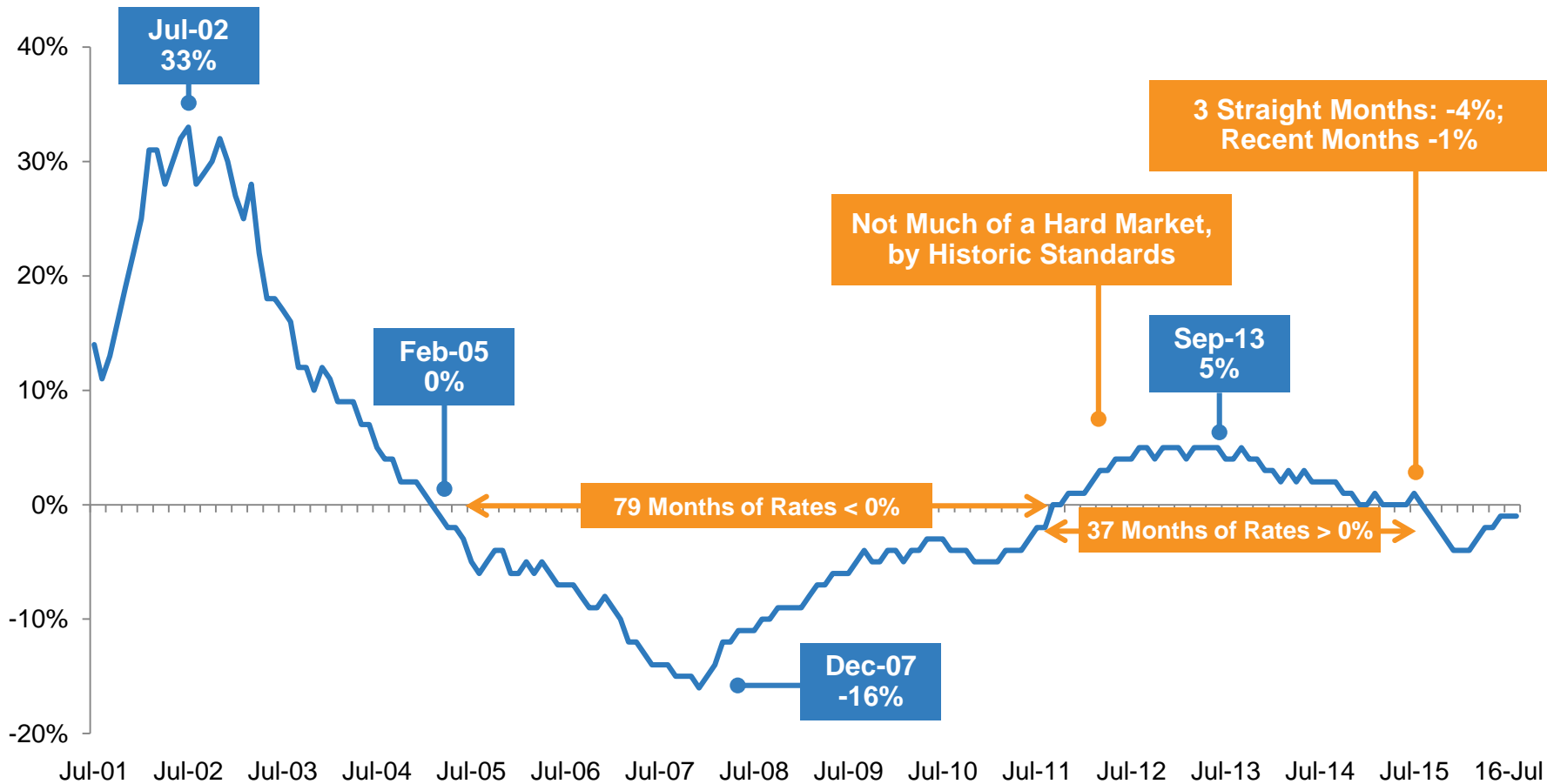
# Commercial Lines Rate Change by Quarter (vs. Year Earlier)



**Second Quarter: <1% Decreases: WC, Property, D&O. 'Meaningful' Increases: Commercial Auto – similar to prior two quarters**



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



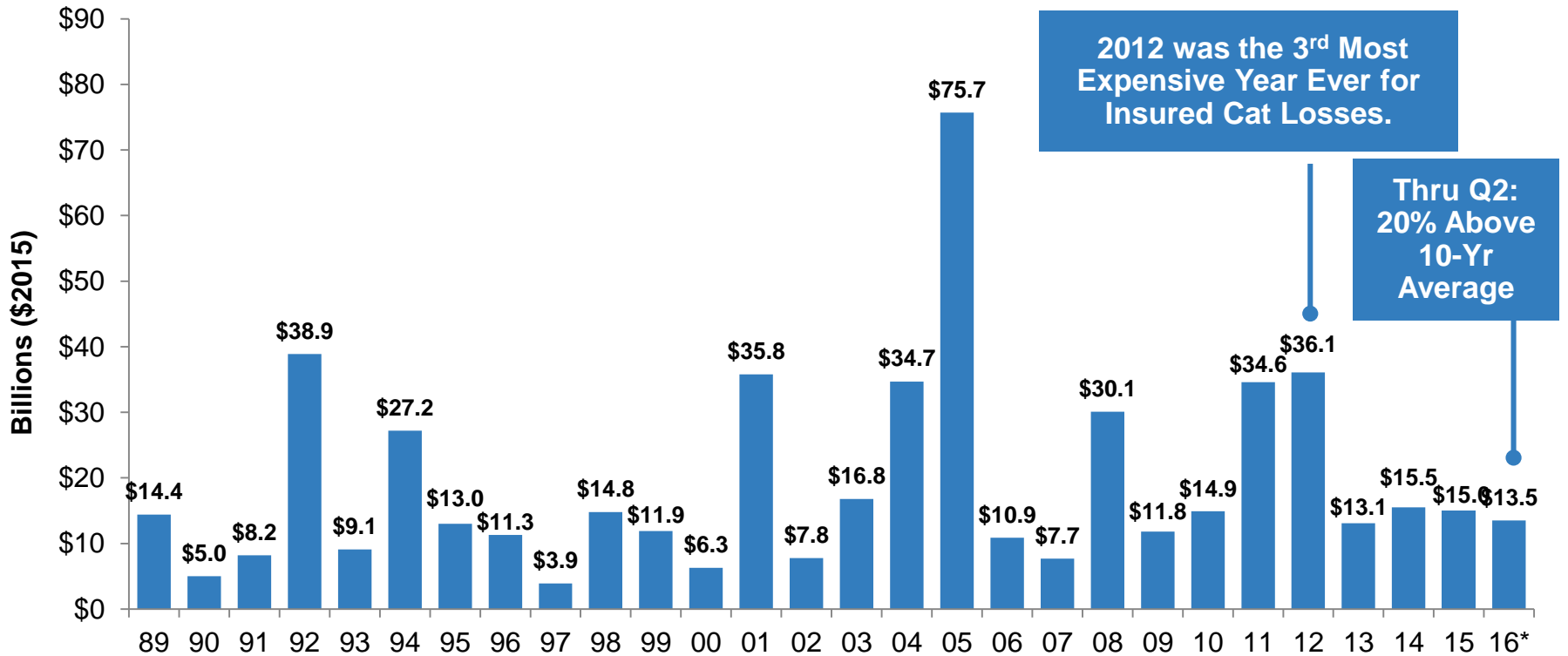
**Rates Are as Stable as They've Been in 15 Years. Modest Declines This Year but That May Be Ebbing. August: -1%**



Sources: MarketScout, Insurance Information Institute.

# Catastrophes

# U.S. Insured Catastrophe Losses



**2013/14/15 Were Welcome Respites from 2011/12, Which Were Among the Costliest Years for Insured Disaster Losses in U.S. History. Longer-term Trend is for More – Not Fewer – Costly Events.**

\*Estimate through first quarter.

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, a Verisk Analytics business; Insurance Information Institute.



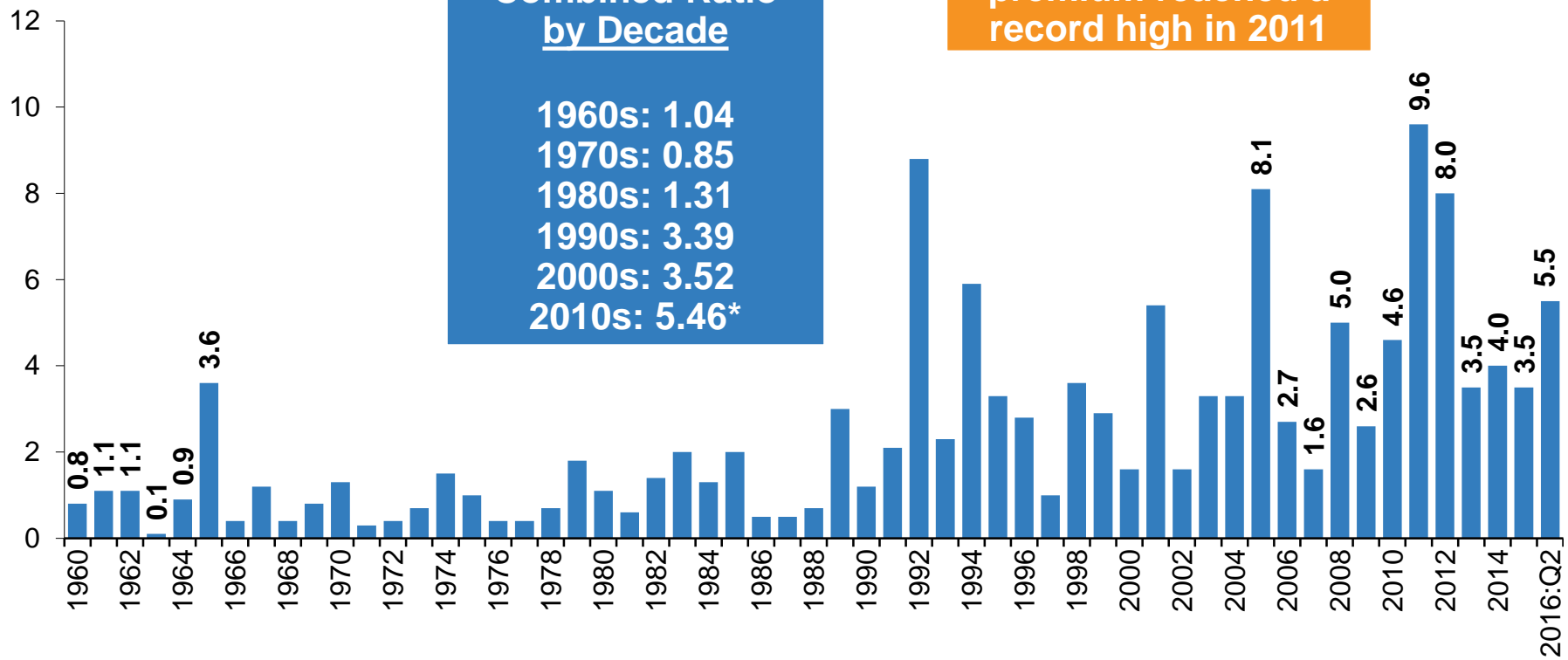
# Combined Ratio Points Associated with Catastrophe Losses: 1960 – 2015

Combined Ratio Points

**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 premium reached a record high in 2011**



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

\*2010s represent 2010-2015.

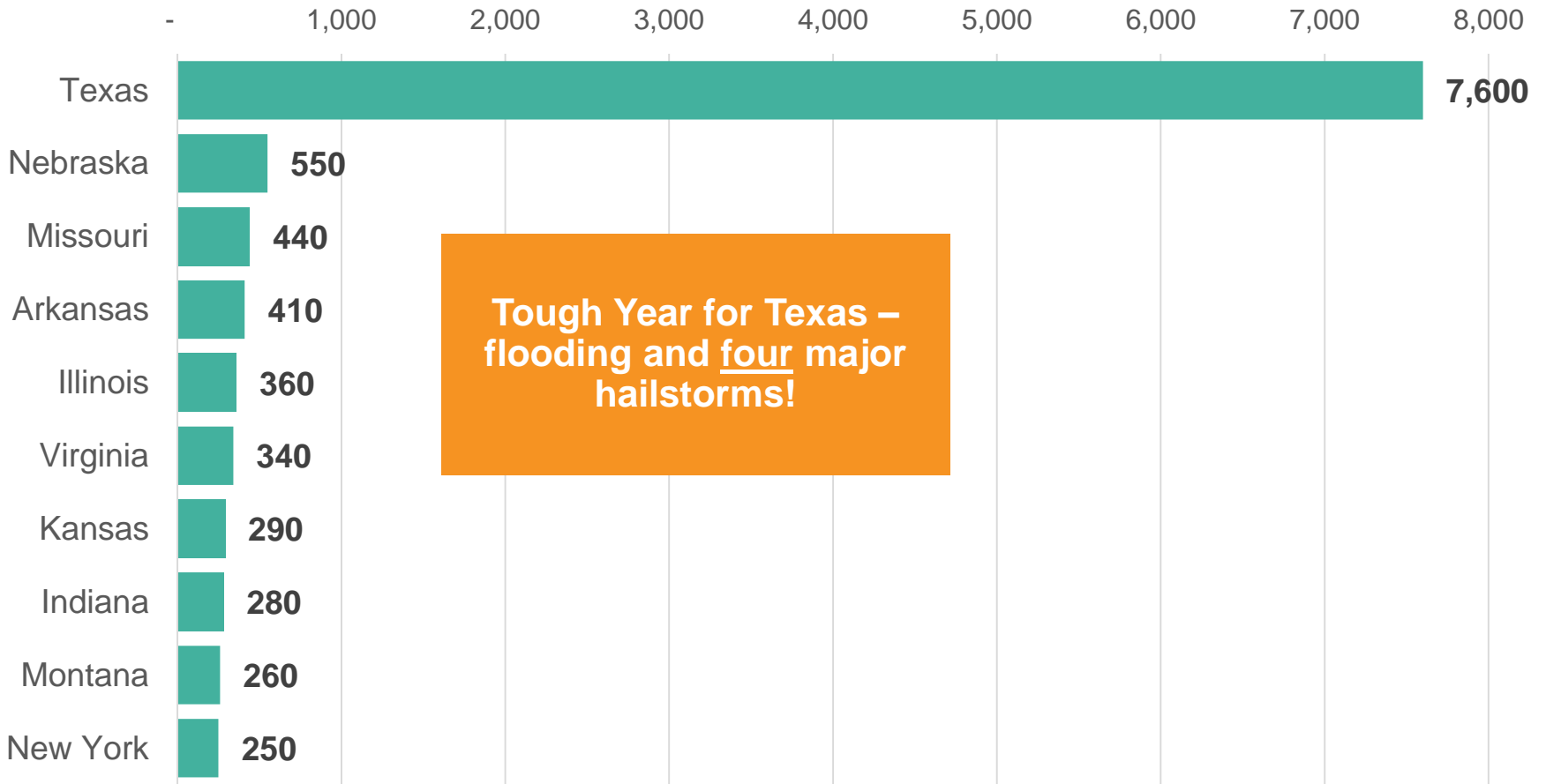
Notes: Private carrier losses only. Excludes loss adjustment expenses and reinsurance reinstatement premiums. Figures are adjusted for losses ultimately paid by foreign insurers and reinsurers.

Source: ISO (1960-2009); A.M. Best (2010-16:Q2); Insurance Information Institute.



# States Hit by Cats, First Half 2016

(Millions of Dollars)



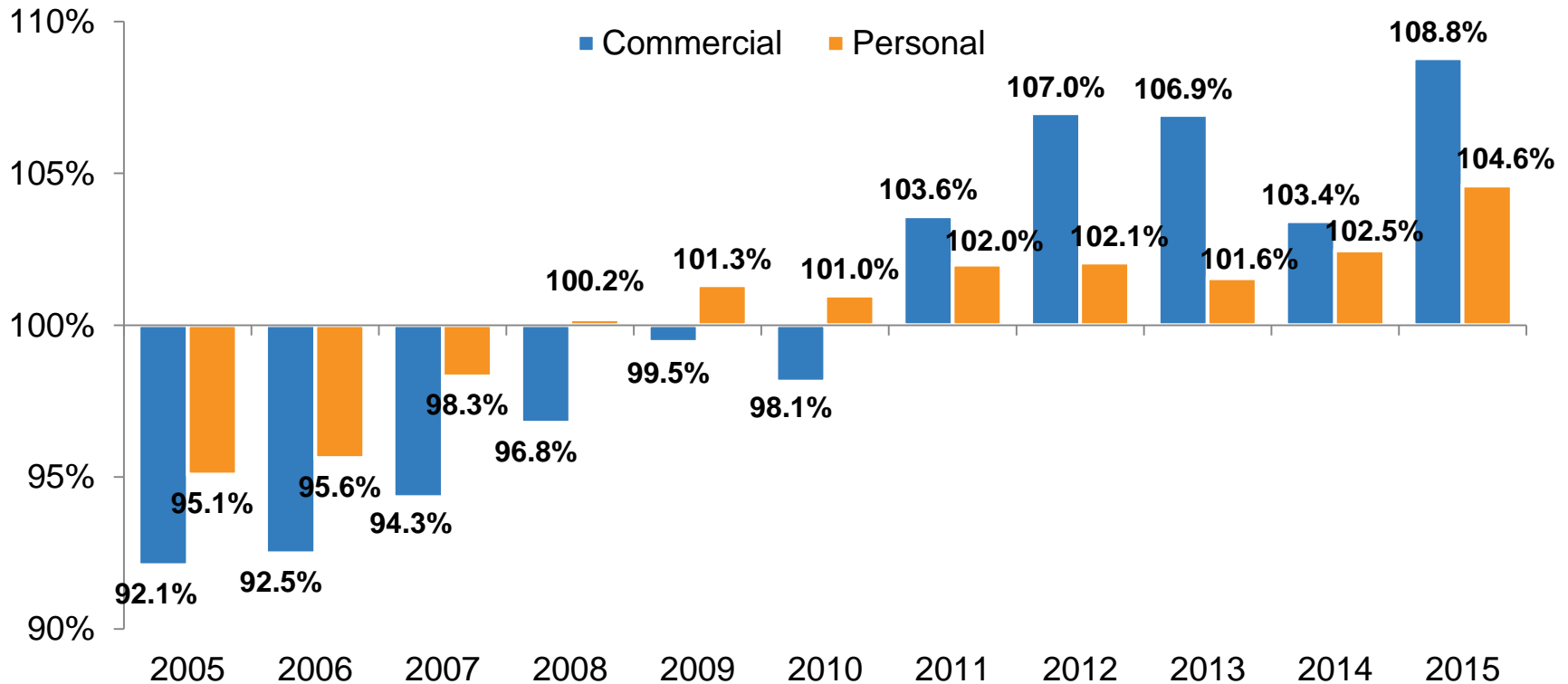
Source: Property Claim Services.

# Auto Insurance

Rising Frequency, Severity Pinching  
the Largest P/C Line



# Net Combined Ratio, 2005-2015



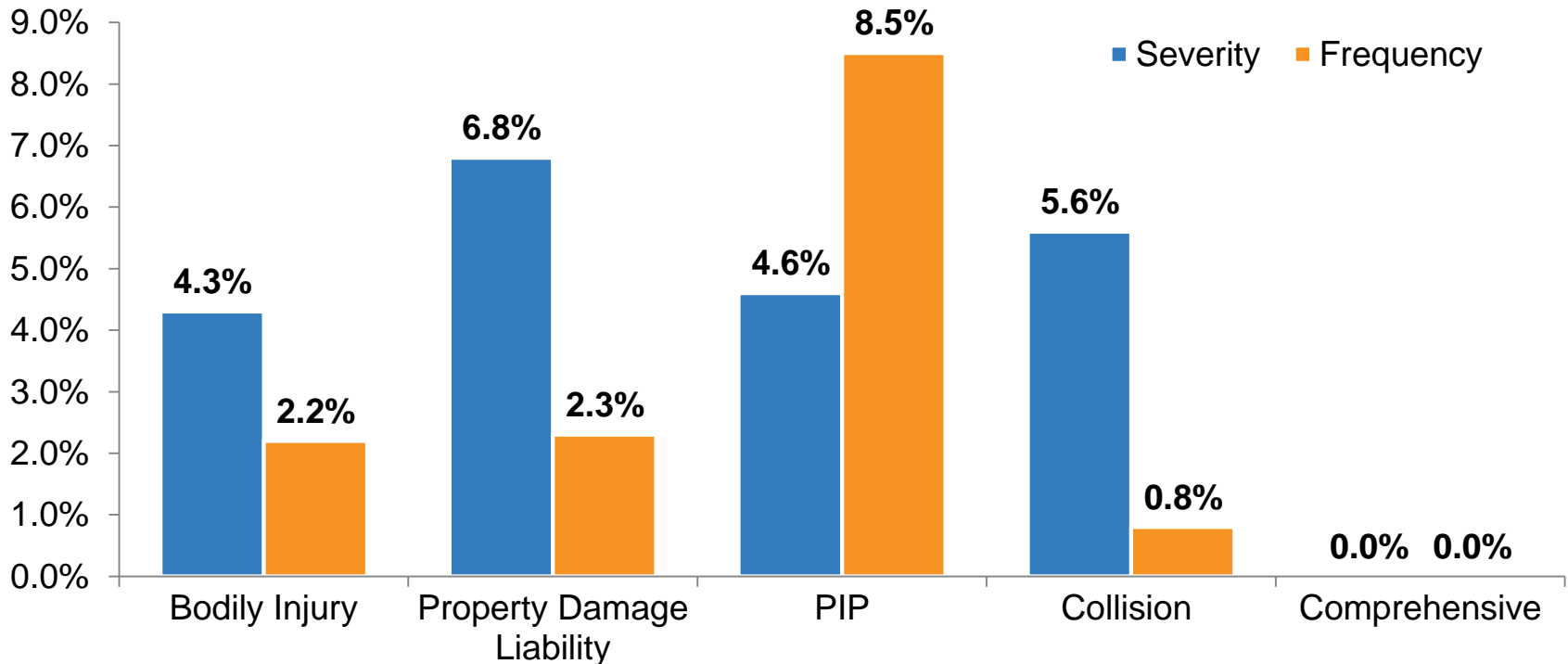
**Loss Ratios Have Been Rising for a Decade.  
2015 Return on Net Worth is Likely Close to Zero or Negative.**



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

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

Annual Change, 2016 Over 2015\*



**Across All Personal Coverage Types (Except Comprehensive) in 2015, Frequency and Severity Rose. This Pattern is Continuing in 2016.**



\*Four quarters ending in March.

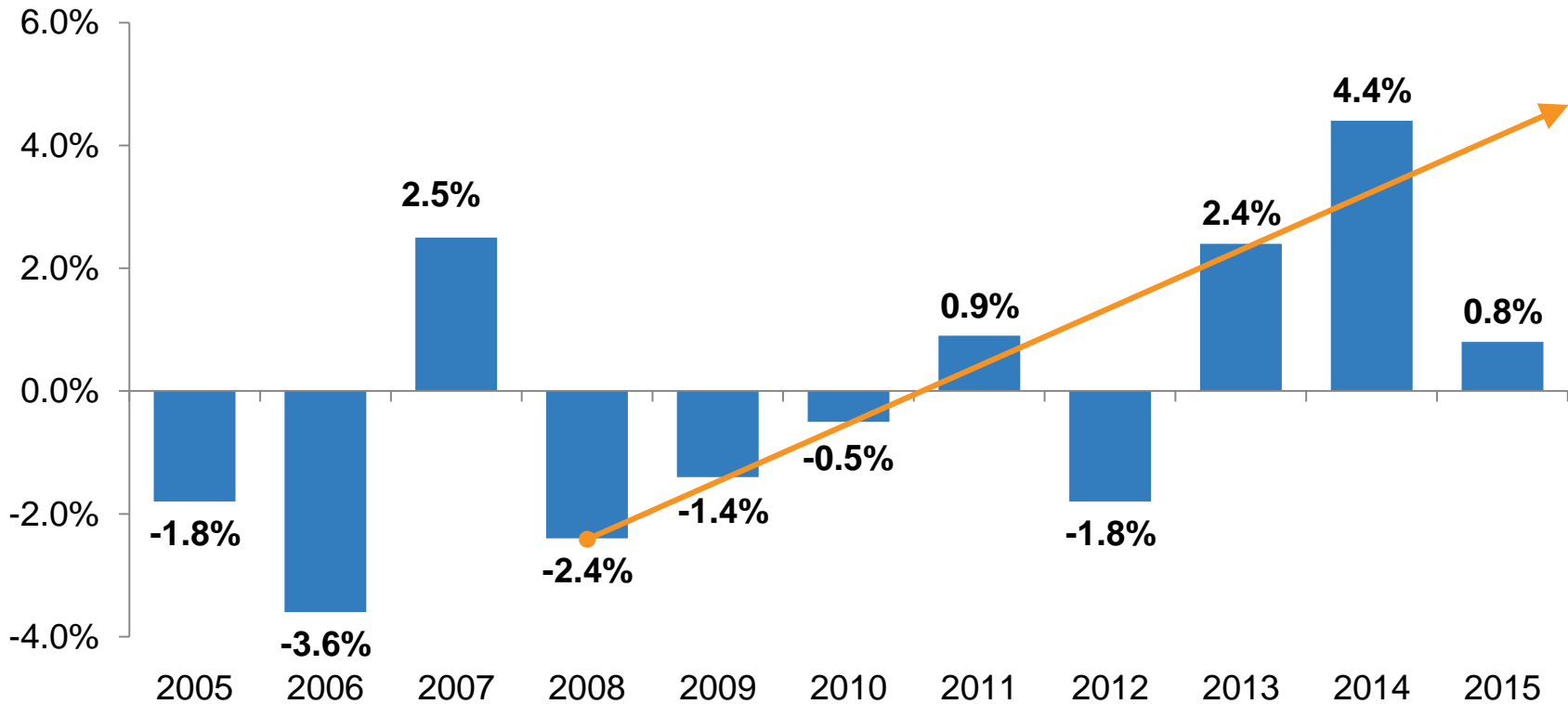
Source: ISO, a Verisk Analytics company; Insurance Information Institute.

# Claim Trends by Coverage

Focus on Collision

# Collision Claims: Frequency Trending Higher in 2015

Annual Change, 2005 through 2015



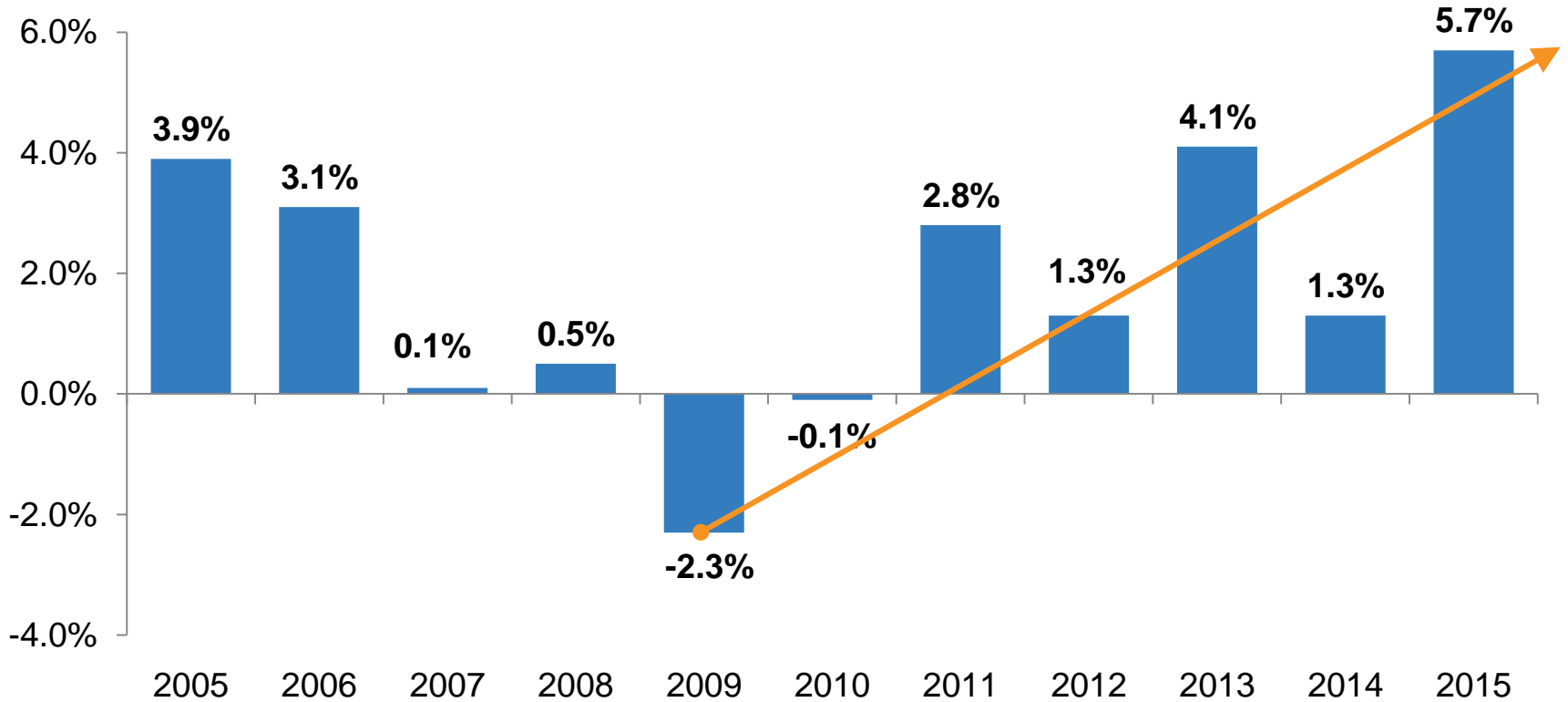
**For a Long Time, Claim Frequency Was Falling, But Since 2010 This Trend Seems to Have Reversed.**



Source: ISO, a Verisk Analytics company; Insurance Information Institute.

# Collision Claims: Severity Trending Higher in 2009-2015

Annual Change, 2005 through 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.**



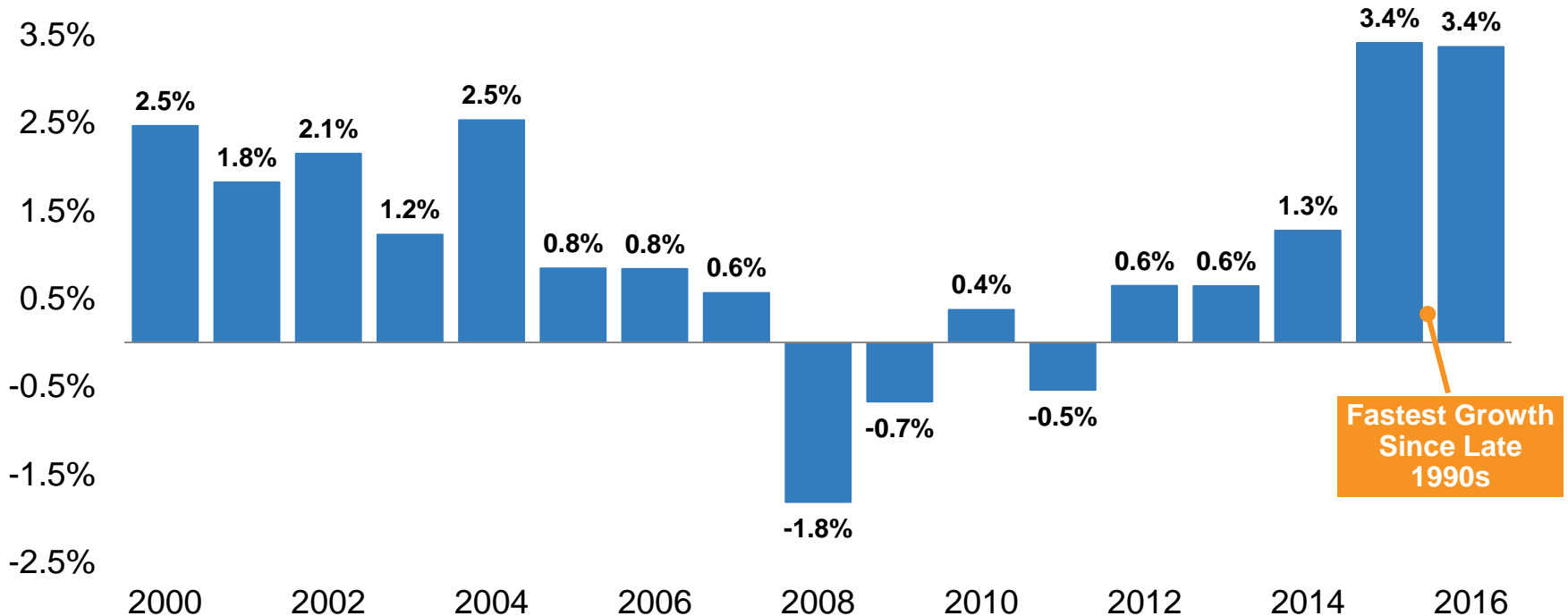
Source: ISO, a Verisk Analytics company; Insurance Information Institute.

# What's Driving These Trends?

Frequency; Severity

# America is Driving More Again: 2000-2016

Percent Change, Miles Driven\*



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

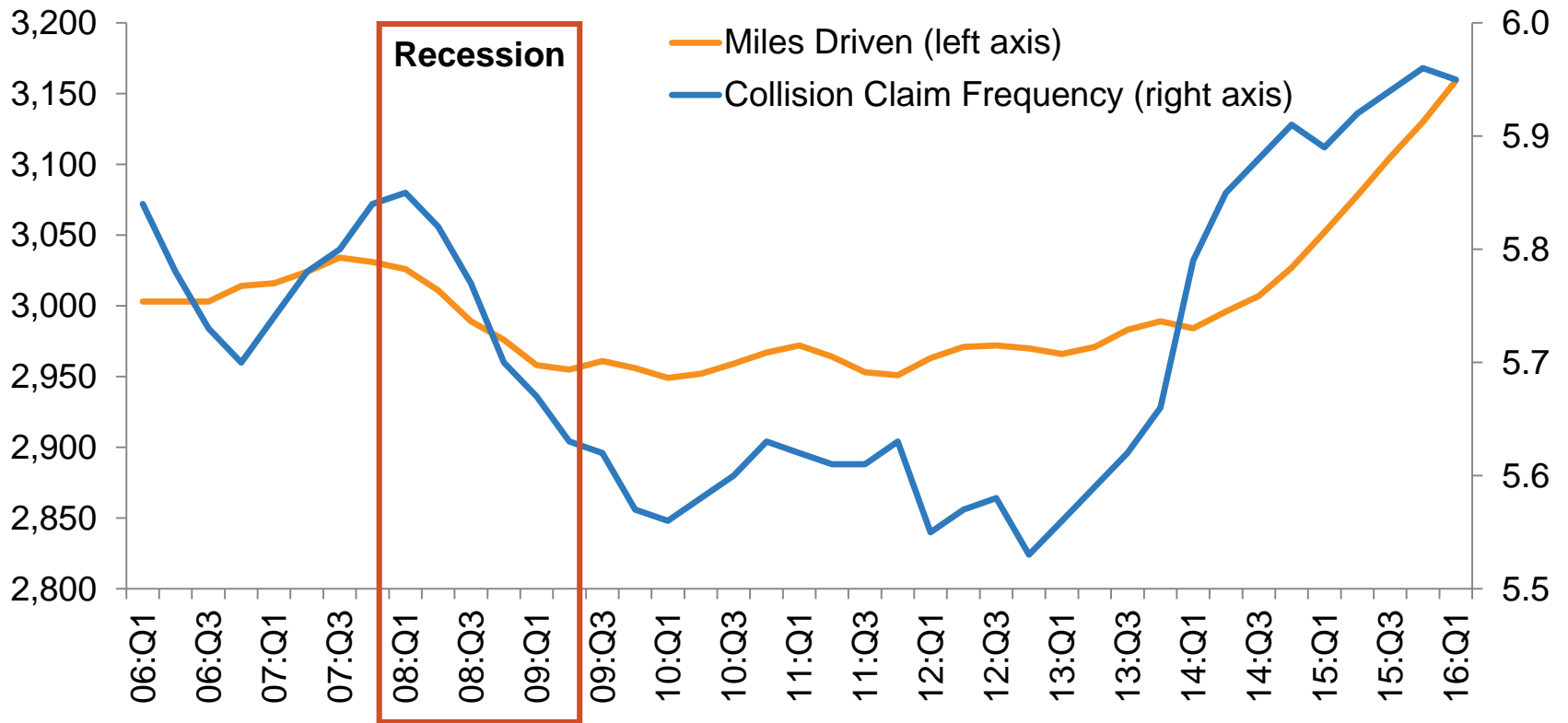


\*2000-2015: Moving 12-month total vs. prior year. 2016 data through May 2016, the latest available, vs. May 2015.  
Sources: [Federal Highway Administration](#); National Bureau of Economic Research (recession dates); Insurance Information Institute.

# More Miles Driven => More Collisions, 2006-2016

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.**



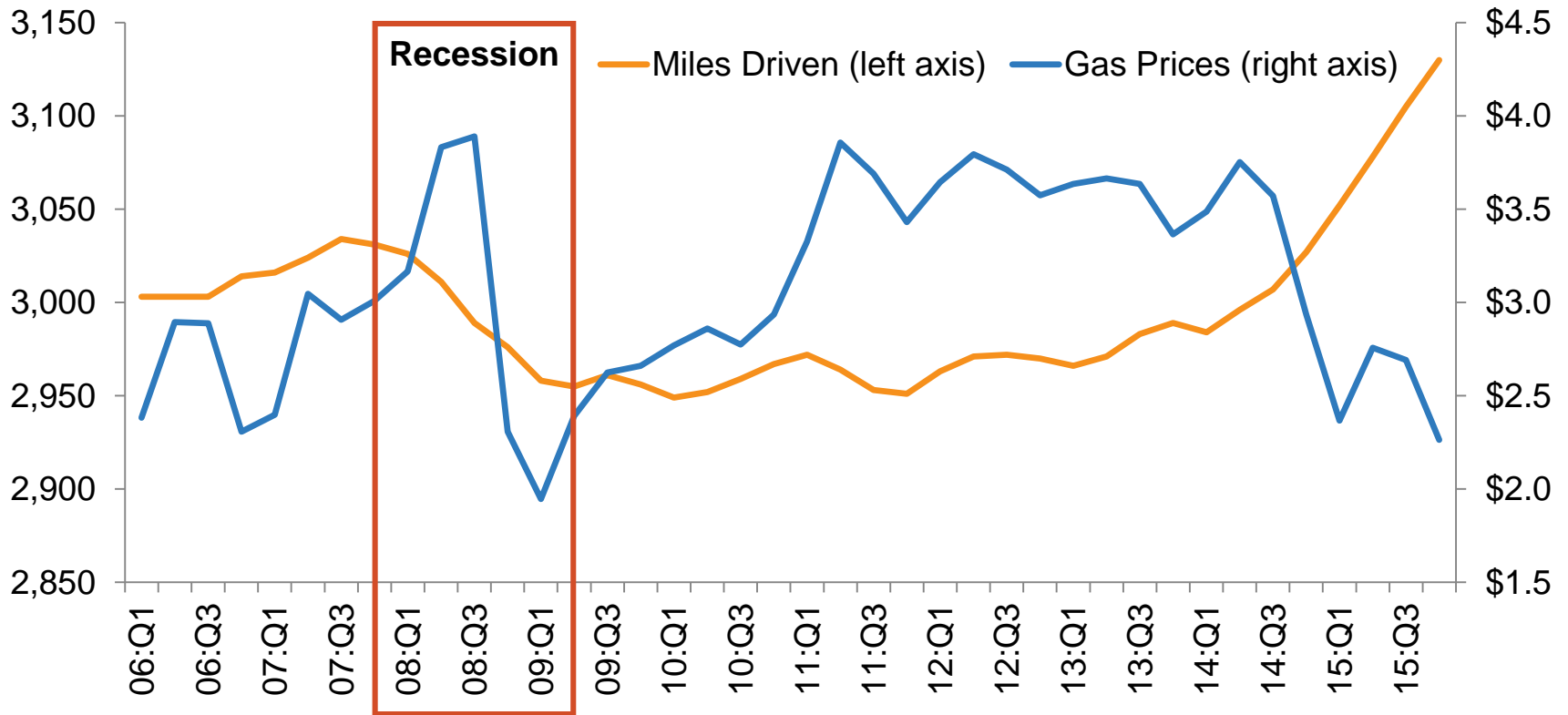
Sources: [Federal Highway Administration](#); Rolling four-quarter average frequency from ISO, a Verisk Analytics company; Insurance Institute for Highway Safety; Insurance Information Institute.



# Why Are People Driving More Miles? Cheap Gas?

Billions of Miles Driven in Prior Year

Average Price Per Gallon



**Gas Prices Don't Seem Correlated With Miles Driven.**

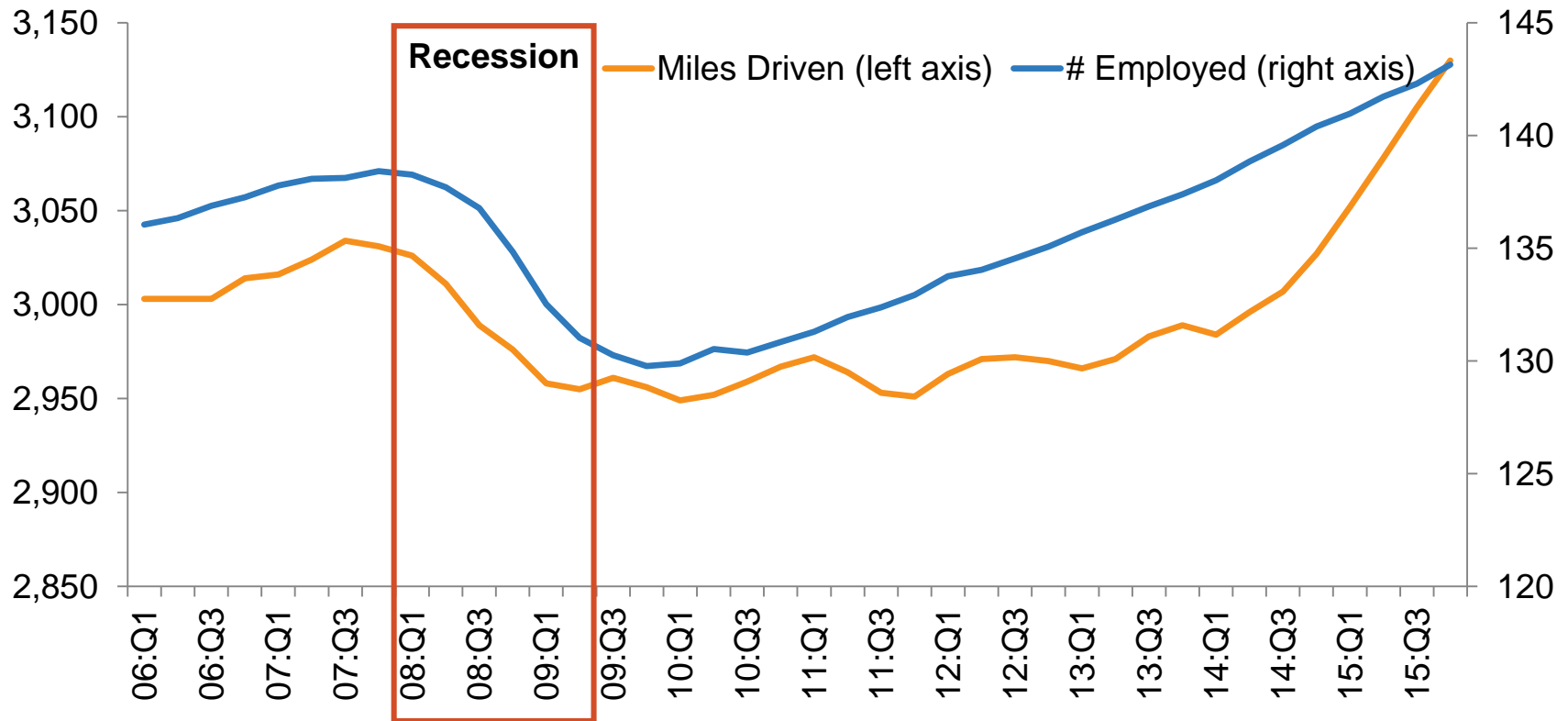


Sources: [Federal Highway Administration](#); Energy Information Administration; Insurance Institute for Highway Safety; Insurance Information Institute.

# Why Are People Driving More Miles? Jobs?

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.**



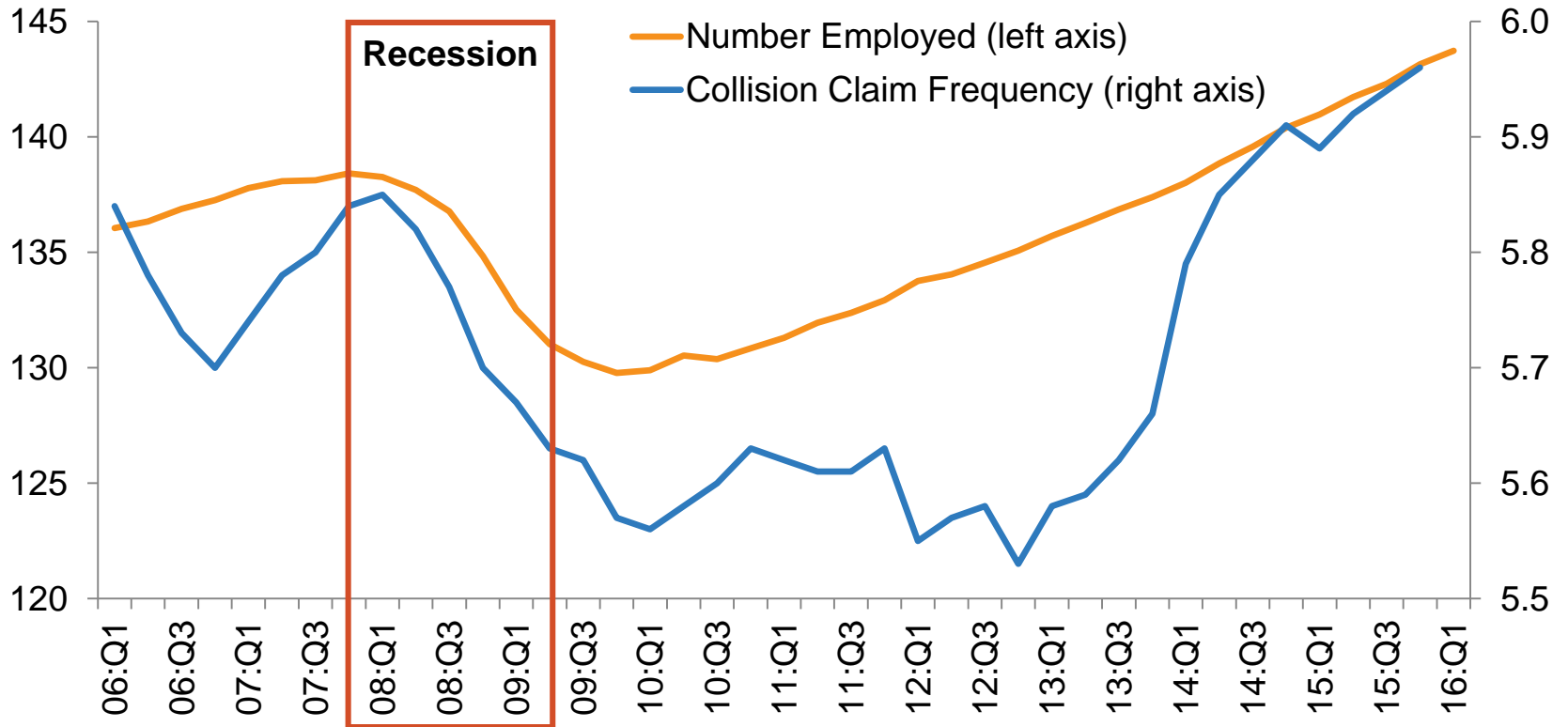
Sources: [Federal Highway Administration](#); Seasonally Adjusted Employed from Bureau of Labor Statistics; Insurance Institute for Highway Safety; Insurance Information Institute.



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

Number Employed, Millions

Overall Collision Claims Per 100 Insured Vehicles



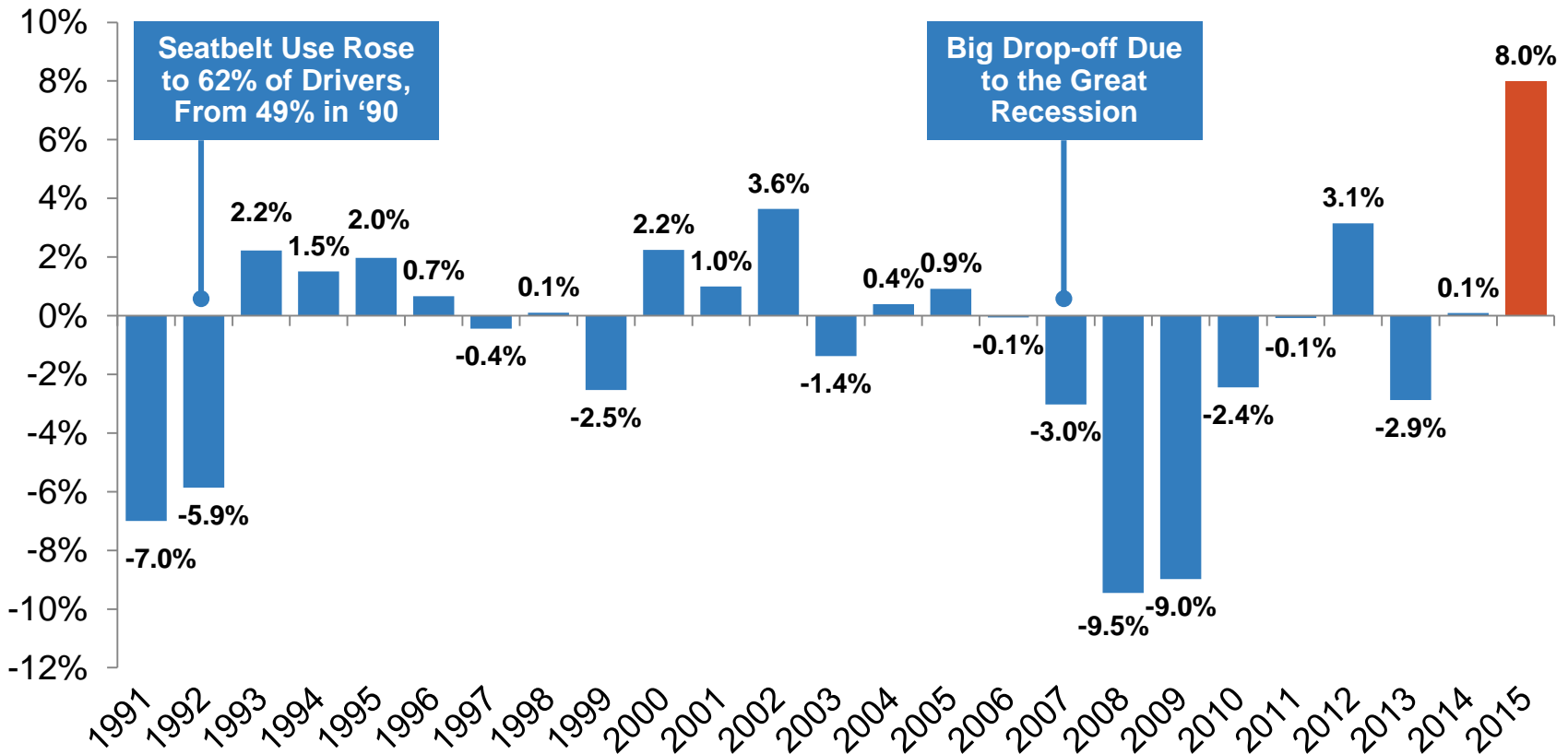
**When People are Out of Work, They Drive Less. When They Get Jobs, They Drive to Work, Helping Drive Claim Frequency Higher.**



Sources: Seasonally Adjusted Employed from Bureau of Labor Statistics; Rolling four-quarter average frequency from ISO, a Verisk Analytics company; Insurance Information Institute.

# Severity: Driving Fatalities are Rising

Annual Change in Motor Vehicle Deaths



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



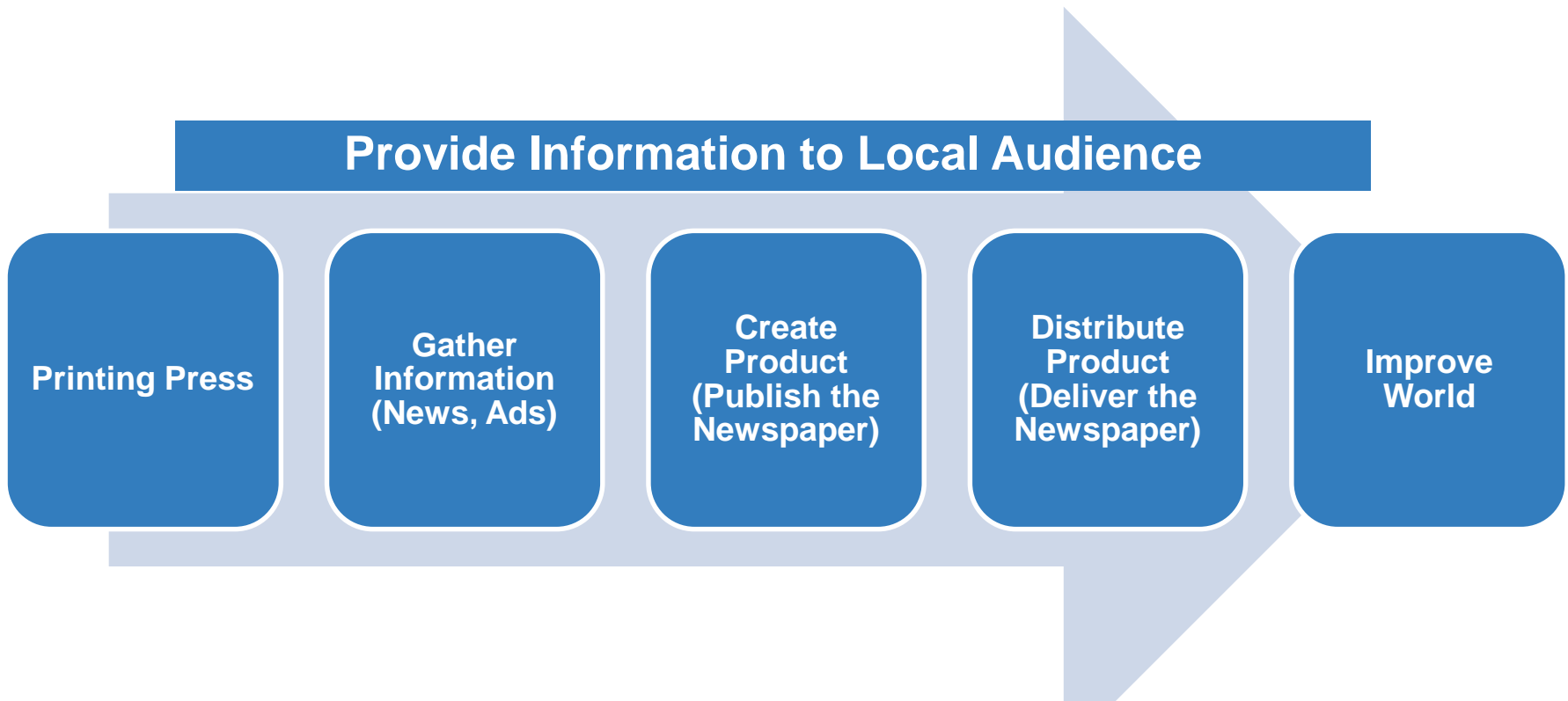
Sources: National Safety Council, Insurance Information Institute.

# On the Horizon

Sharing Economy and Disruption

# What Is A Value Chain?

Example: Local Newspapers

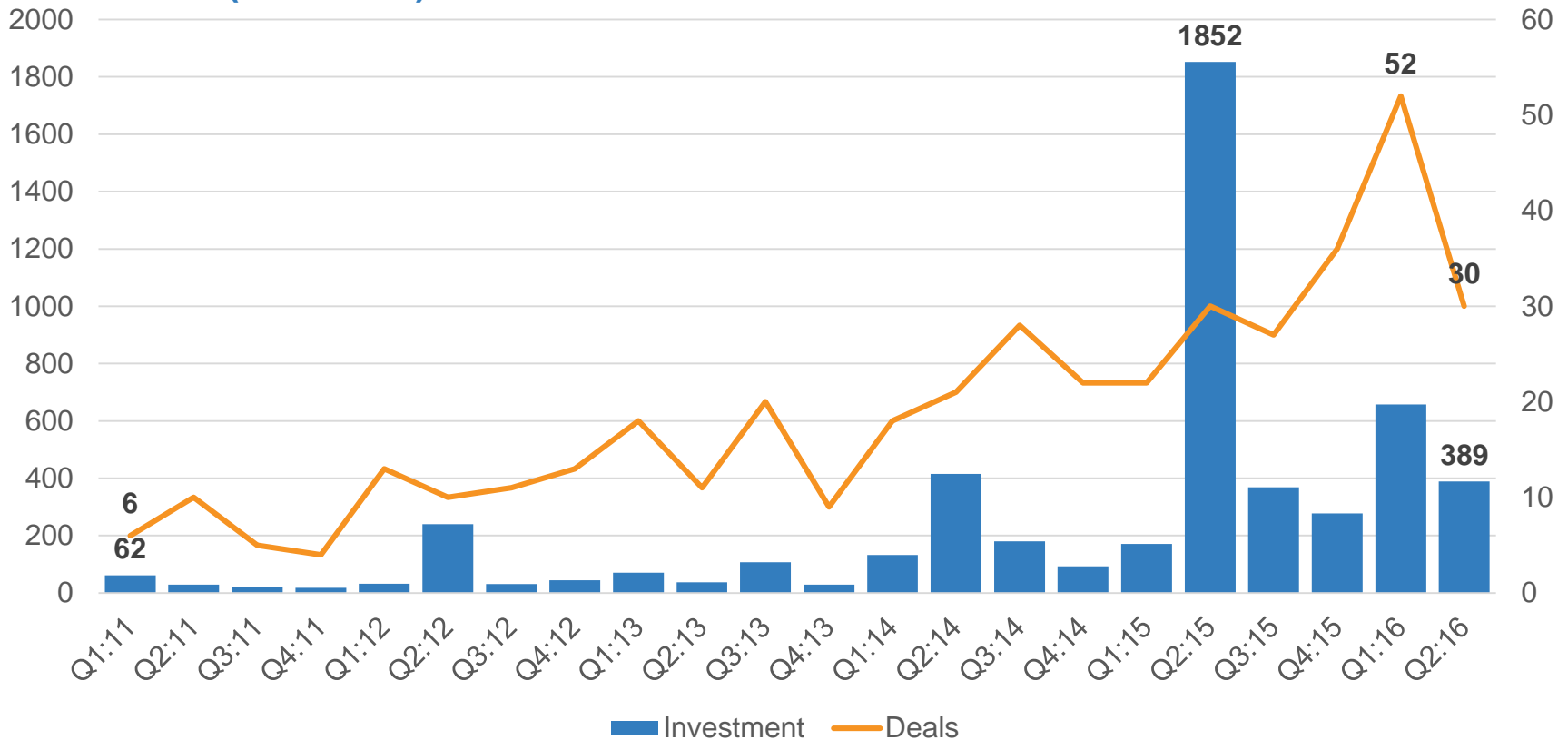


**This Industry Was Radically Disrupted by the Internet. Its Barriers to Entry Were Destroyed. Is Insurance Next?**



# Insurance Technology Financing – Change Is Coming

## Investment (\$ Millions)



**Investment In Insurance Tech Is Rising. Number of Deals Reached A Record in First Quarter.**



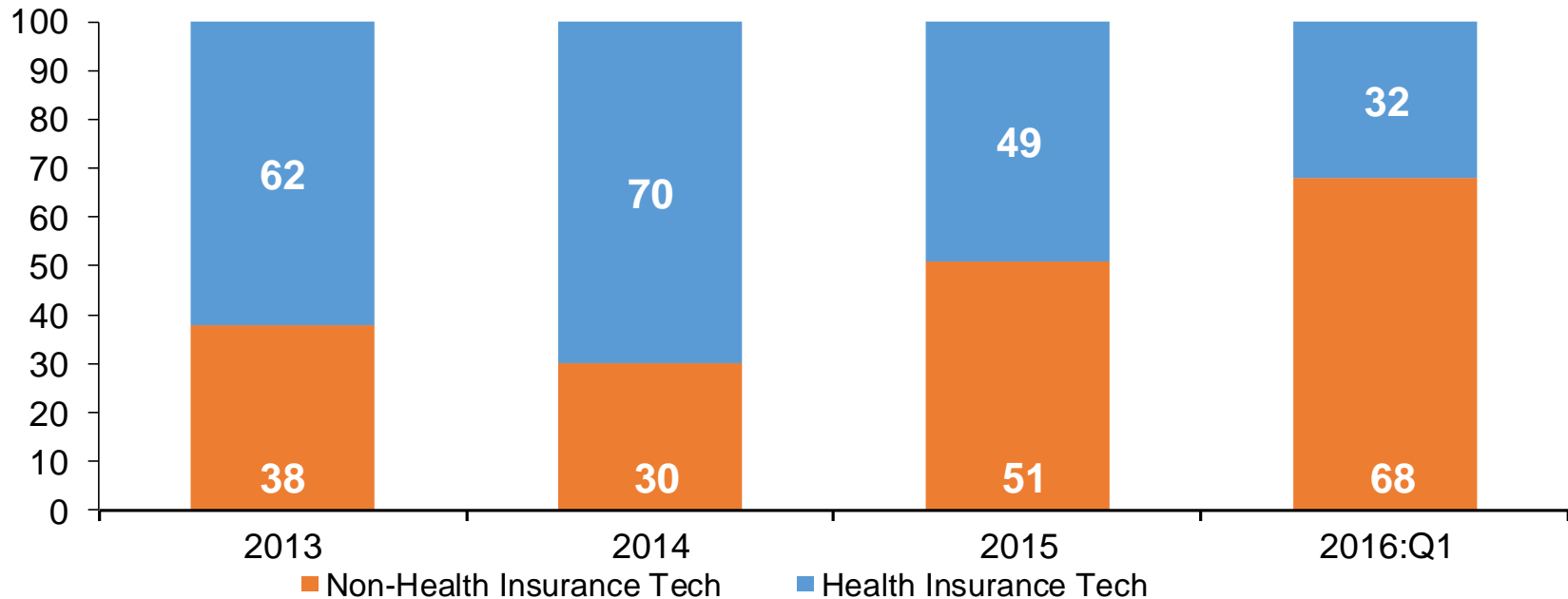
SOURCES: CB Insights, Insurance Information Institute.



# Insurance Tech Activity by Area of Interest, 2013 – 2016:Q1

With the ACA in the rear view window, non-health insurance tech accounts for the majority of investment

(Percent)



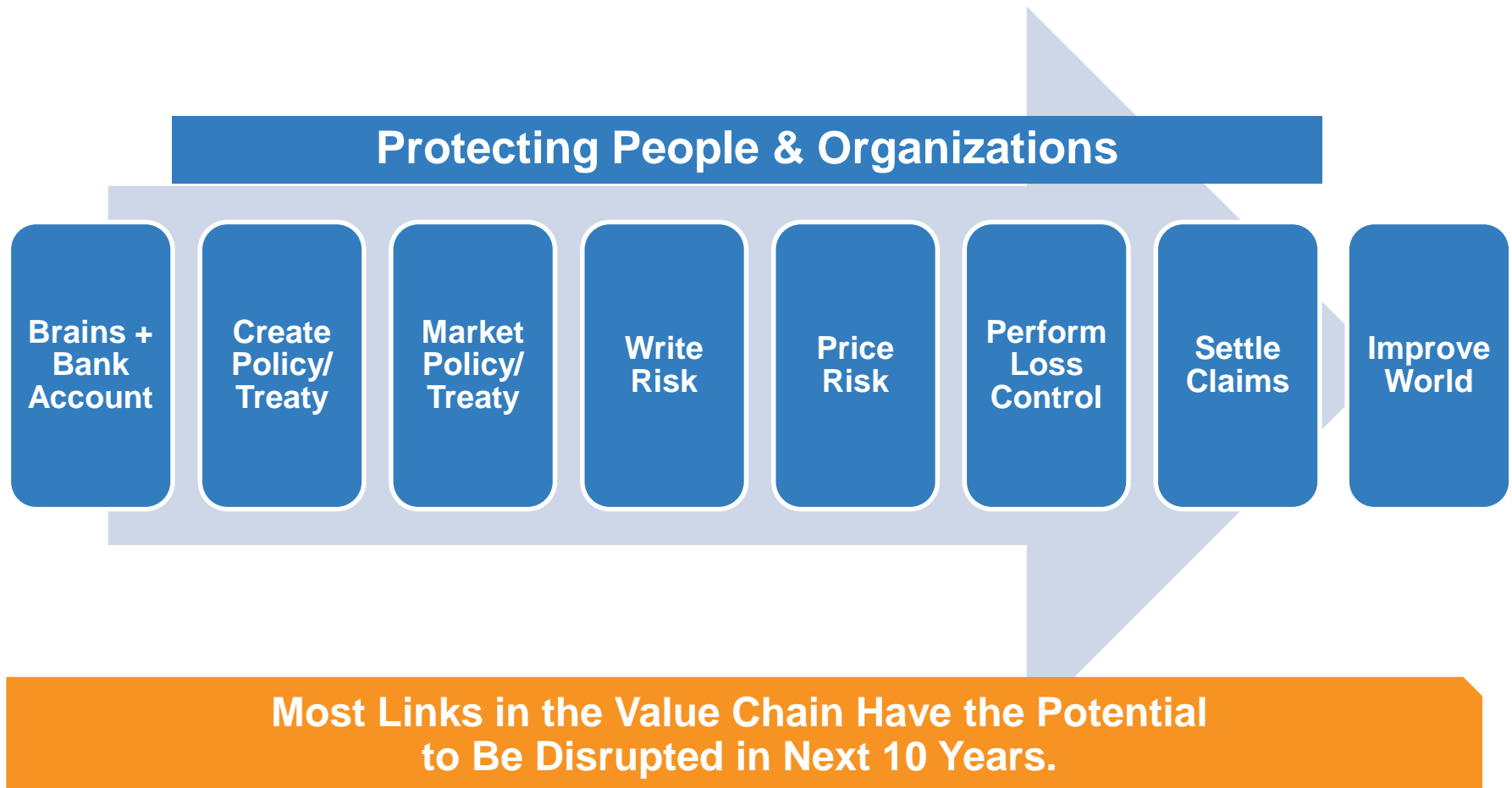
**Silicon Valley, Venture Capitalists Have Insurance Industry in Their Sights. Most Will Fail. Some Will Succeed.**



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

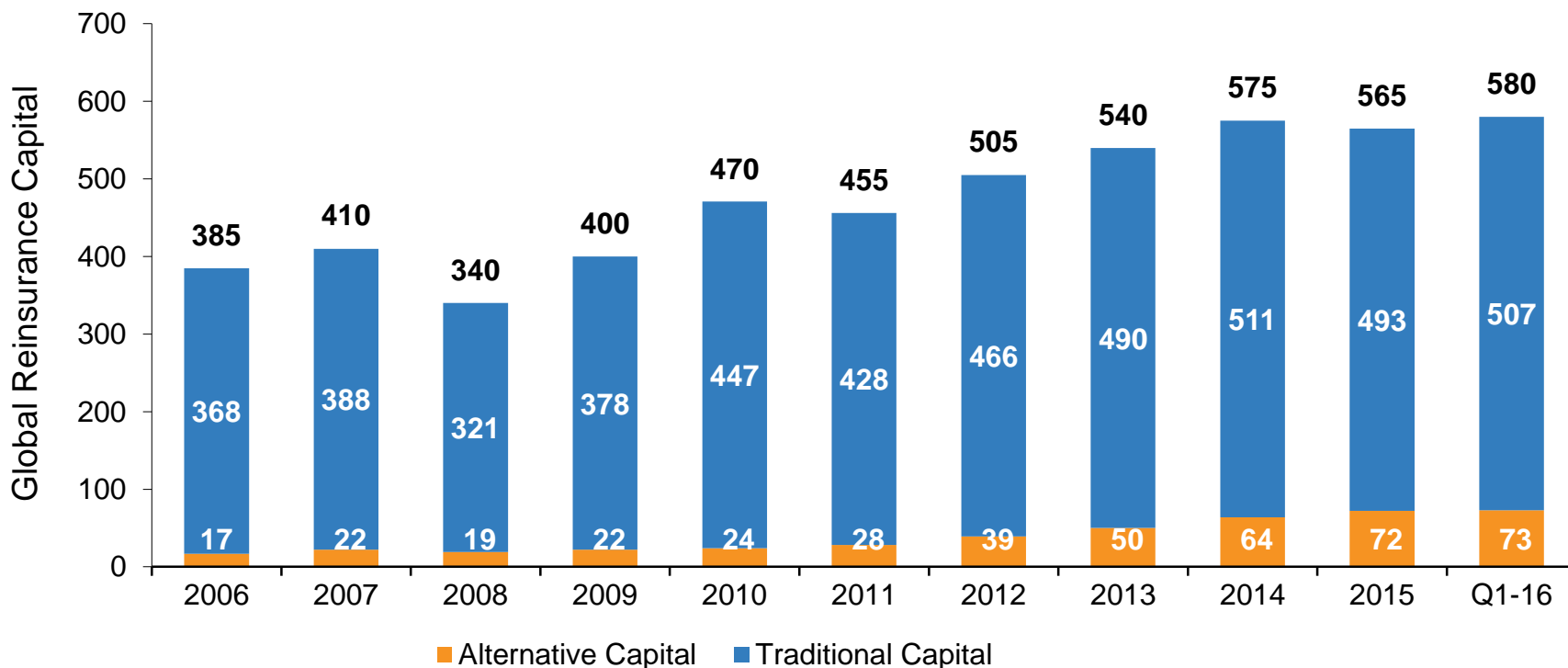
# The (Re)Insurance Value Chain

Where Could Disruption Lie?



# Alternative Capital Potentially Disrupting the Bank Account

(Billions of USD)



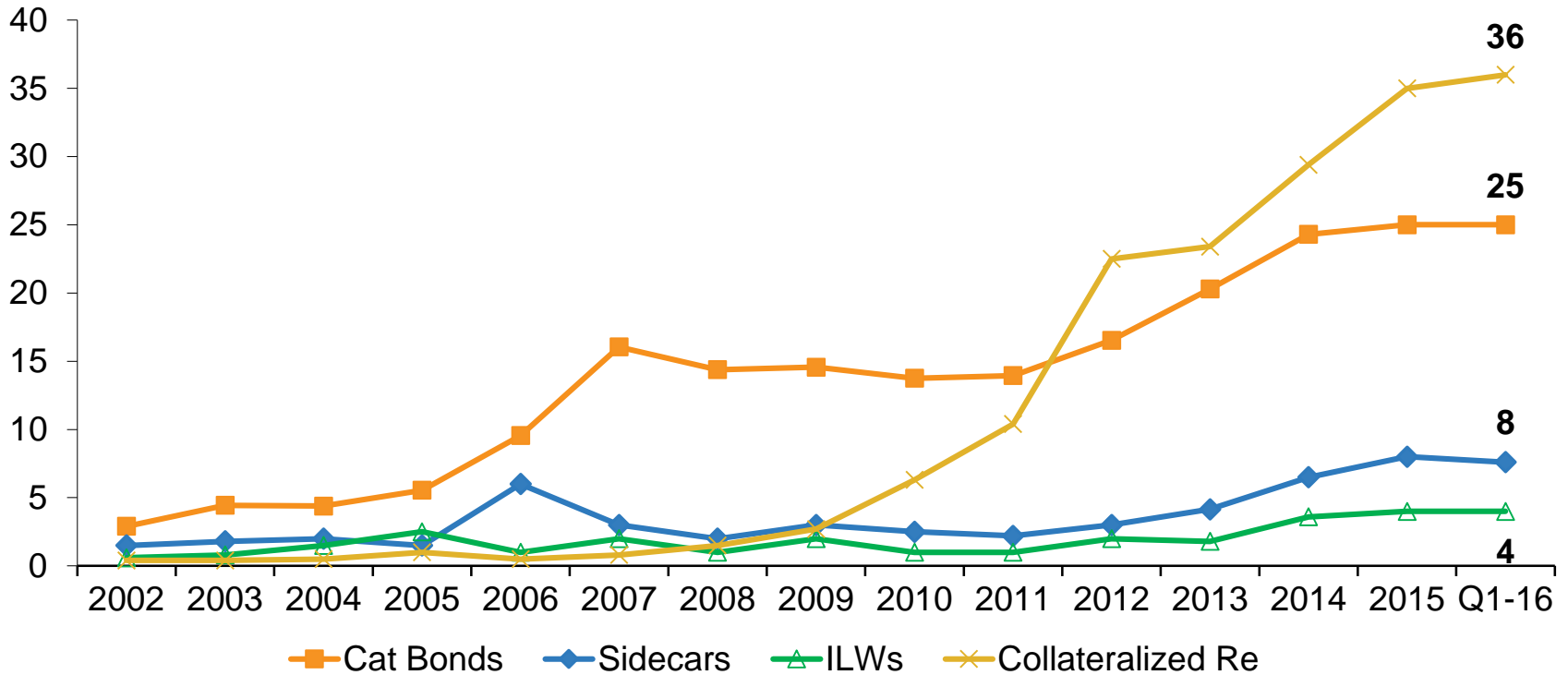
**Alternative capacity has grown 263% since 2008. It has more than tripled in the past six years.**



Source: Aon Benfield Analytics; Insurance Information Institute.

# Alternative Capital Potentially Disrupting the Bank Account

(Billions of USD)



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



Source: Aon Benfield Analytics; 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

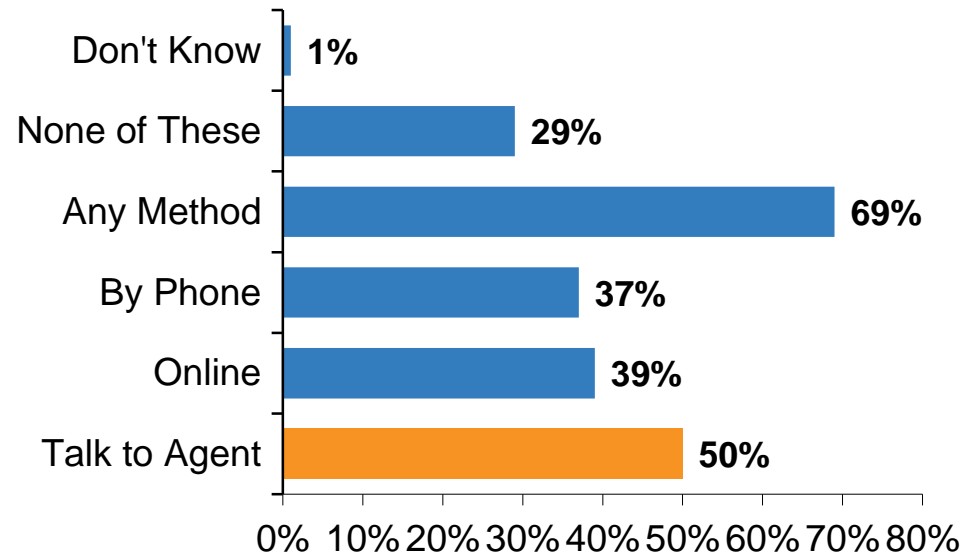
- ◆ SelectQuote, Goji
- ◆ Call center employs agents

### ▲ 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



## ▲ Monitoring Could Affect

- ◆ Loss Control
- ◆ Pricing?



iWatch

# As For The Future...



**IoT Could Disrupt UW, Claims, Loss Control**



Image sources, clockwise: [Nest](#), [Jawbone](#), [Automatic](#), [Lumo](#), [Apple](#), [PSFK](#)

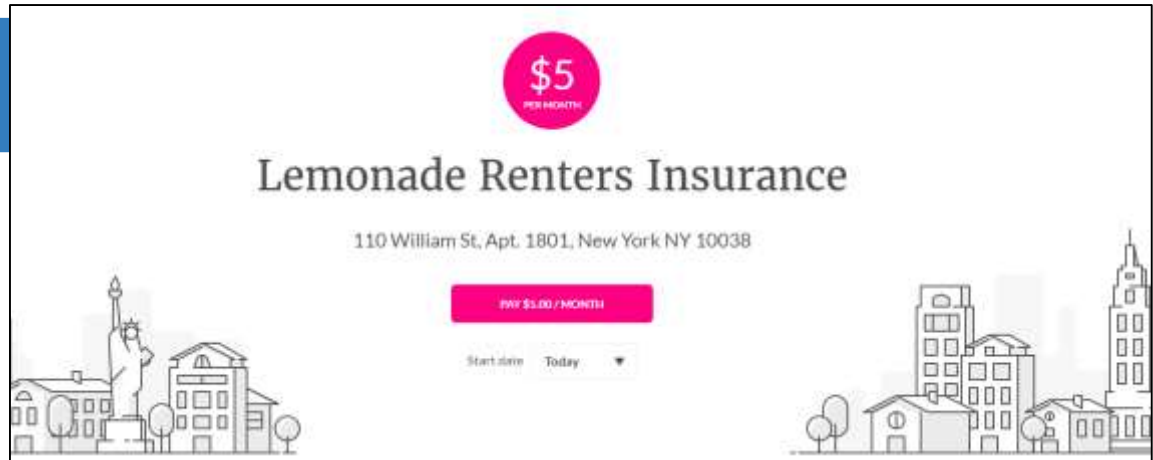


# Peer-to-Peer (P2P) Insurance

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!



## CEO Daniel Schreiber

- ▲ Our Chief Behavioral Officer, Professor Dan Ariely, says that “If you tried to create a system to bring out the worst in humans, it would look a lot like the insurance of today.”



Source: “UberX-ing Insurance : Is Peer-to-Peer Insurance Viable?”, presentation by Jay Sarzen, Aite Group at Drinker Biddle Insurance Conference, June 21, 2016; Financial Times; [www.lemonade.com](http://www.lemonade.com).

# Lemonade's P2P Model

## Example: Renters' Insurance (HO-4)

### 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.



**LIABILITY**

A person slips and falls at your party breaking a leg



**PERSONALISM**

Artwork, clothing

### 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**



# Lemonade's P2P Model

## Questions

- ▲ Who Holds the Risk?
  - ◆ Captive? Front?
- ▲ How Are Charitable Pools Separated?
  - ◆ Segregated Cell Captive?
- ▲ Who Gets the Float?
  - ◆ Insurer, Reinsurer or Charity?
- ▲ Who Gets the Tax Deduction (Worth More Than the Float)?



# Summary

- ▲ The industry is in good financial shape with several years of modest profits.
- ▲ Interest rates look like they'll stay low
- ▲ Recent years have had modest cuts; U.S. This year hurt by severe weather
- ▲ Auto costs are rising (both frequency and severity)
- ▲ Disruption provides opportunities and challenges throughout the value chain





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