P/C Insurance Industry Outlook
Focus on Claims Trends

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Robert P. Hartwig, Ph.D., CPCU
Clinical Associate Professor of Finance, Risk Management & Insurance
Darla Moore School of Business ♦ University of South Carolina
Robert.Hartwig@moore.sc.edu ♦ 803.777.6782

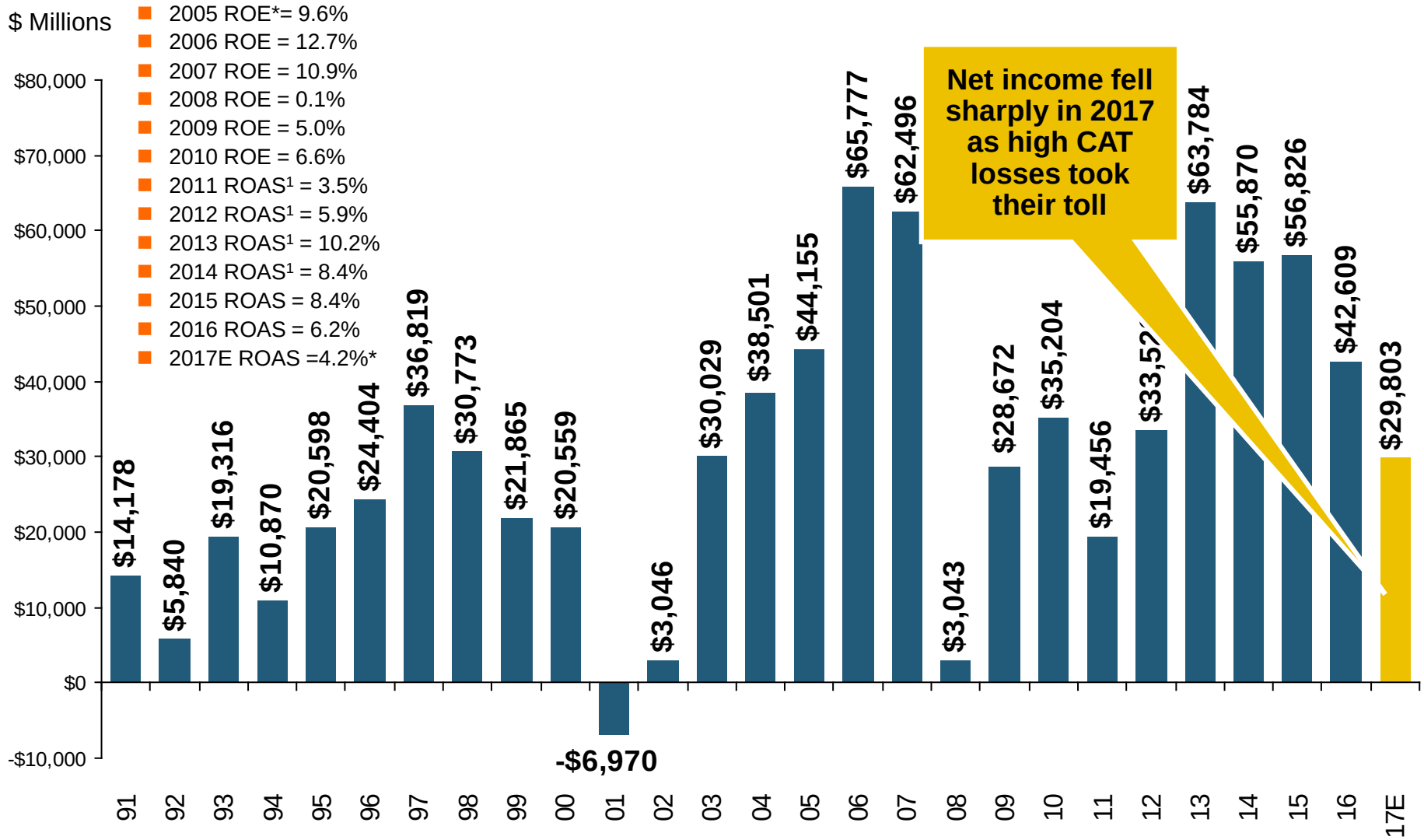
UNIVERSITY OF
SOUTH CAROLINA
Darla Moore School of Business

P/C Insurance Industry Financial Overview

CATS Claims, Non-CAT Underwriting Losses in Personal and Commercial Auto Impacted Insurer Balance Sheets

Industry Remains Strong, But Major Differences Between Personal and Commercial Lines Growth Prospects

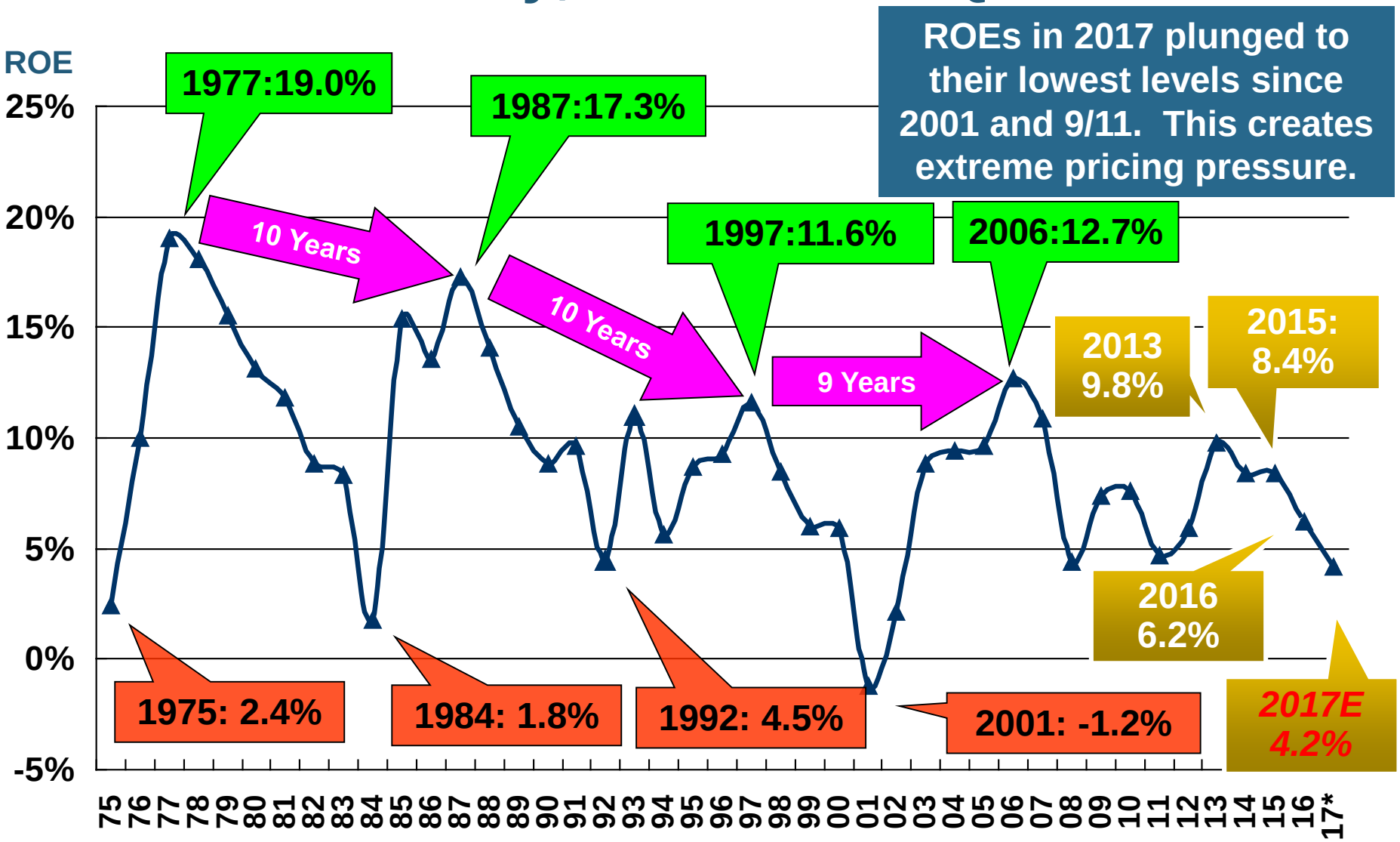
P/C Industry Net Income After Taxes 1991–2017E



•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; 2016E is annualized figure based actual figure through Q3 of $31.8B.

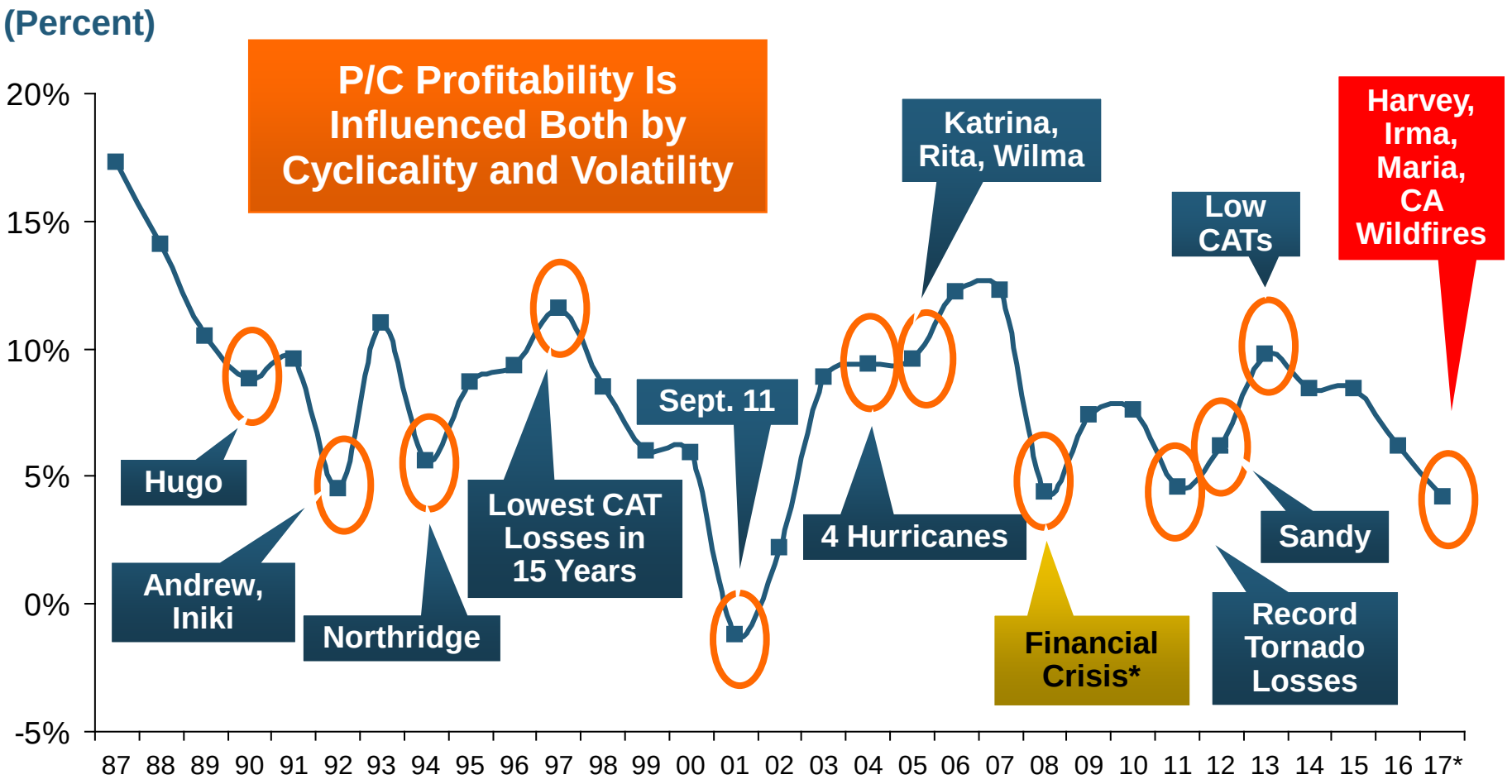
Sources: A.M. Best, ISO; USC RUM Center estimate (2017 based on actual NIAT of $22.352 though Q3 and ROAS of 4.2%).

Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2017:Q3



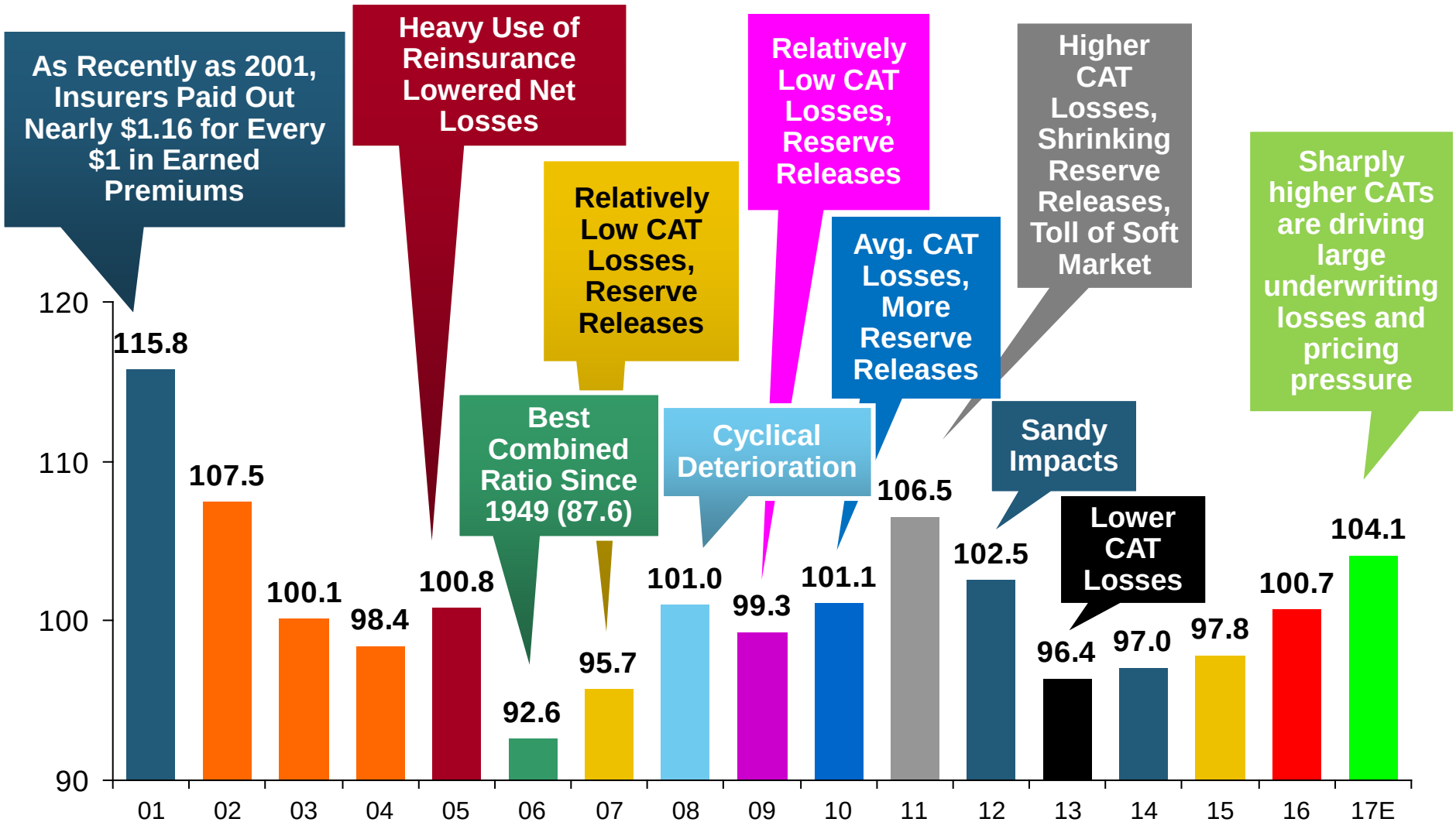
*Est. for 2017 based on actual ROAS of 4.45 through Q2; Profitability = P/C insurer ROEs. 2011-16 figures are estimates based on ROAS data. Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers.
Source: NAIC, ISO, A.M. Best, Conning, USC RUM Center estimates.

ROE: Property/Casualty Insurance by Major Event, 1987–2017E



*2017 Estimate based on actual ROAS through Q3 of 4.2% with USC Center for Risk and Uncertainty Management estimate for the full year.
Excludes Mortgage & Financial Guarantee in 2008 – 2014.
Sources: ISO, *Fortune*; USC RUM Center.

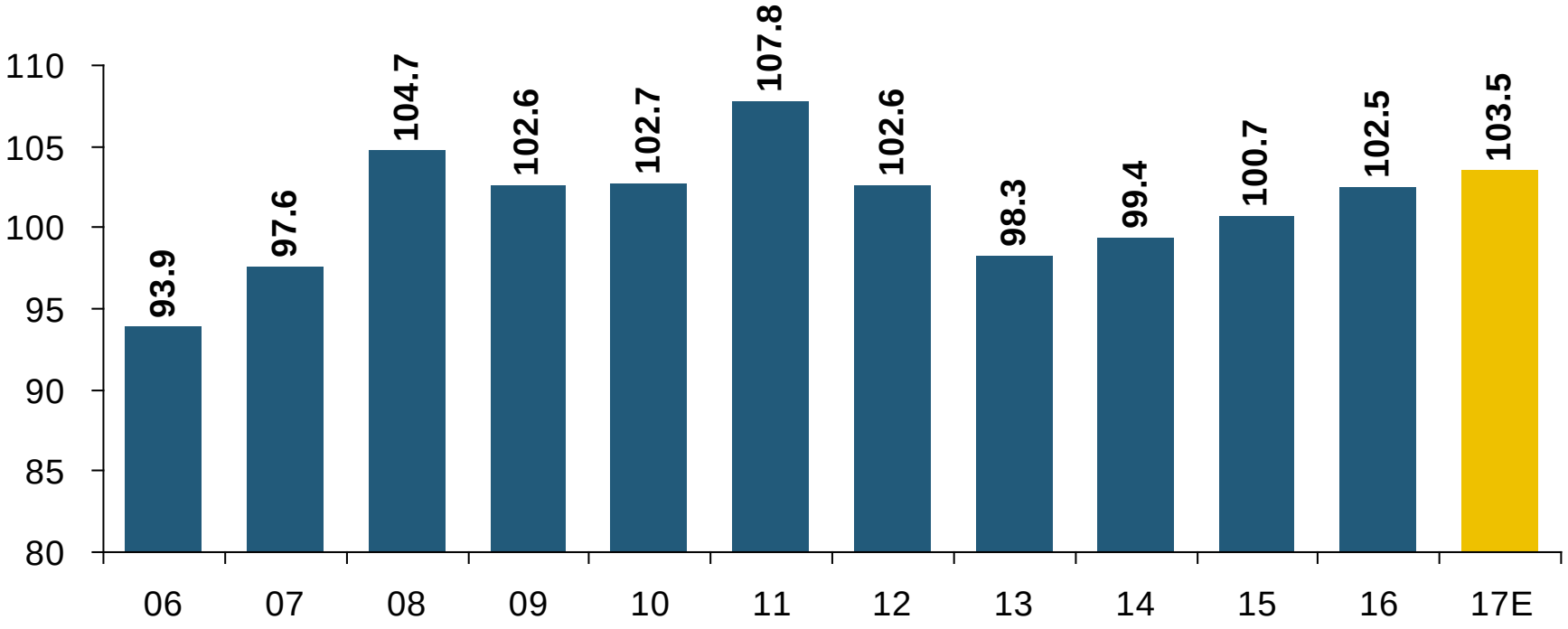
P/C Insurance Industry Combined Ratio, 2001–2017:Q3*



* 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.; 2017 (est.) based on actual 104.1 through Q3 (Q3 combined ratio alone was 110.7).

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

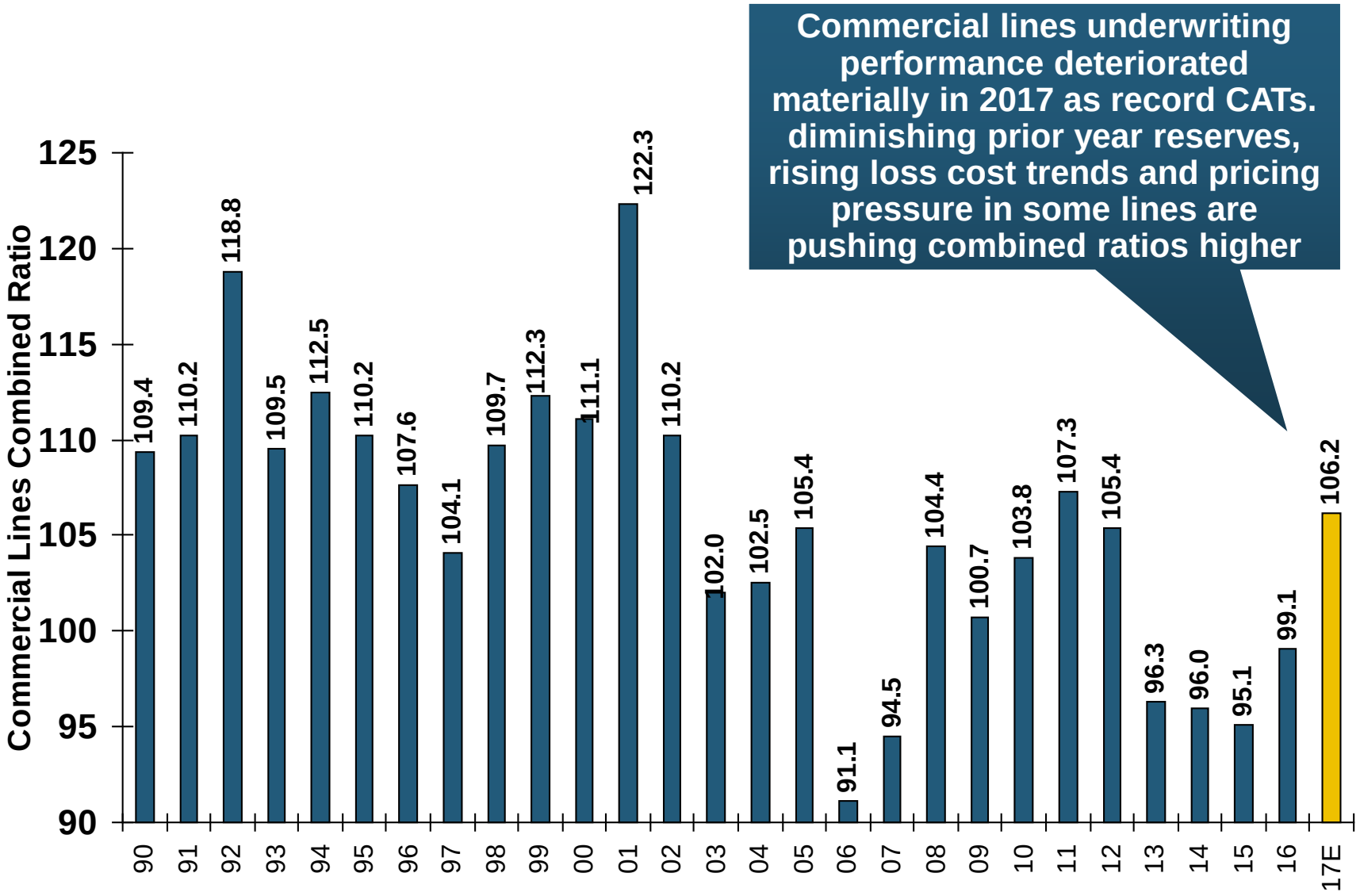
Personal Lines Combined Ratio: 2006–2017E



Personal Lines Underwriting Losses Rose in 2017 Due to Record CATs and Adverse Auto Severity

Source: A.M. Best (2006-2016); USC RUM (2017E using actual 9 mo. YTD combined ratio of 102.8).

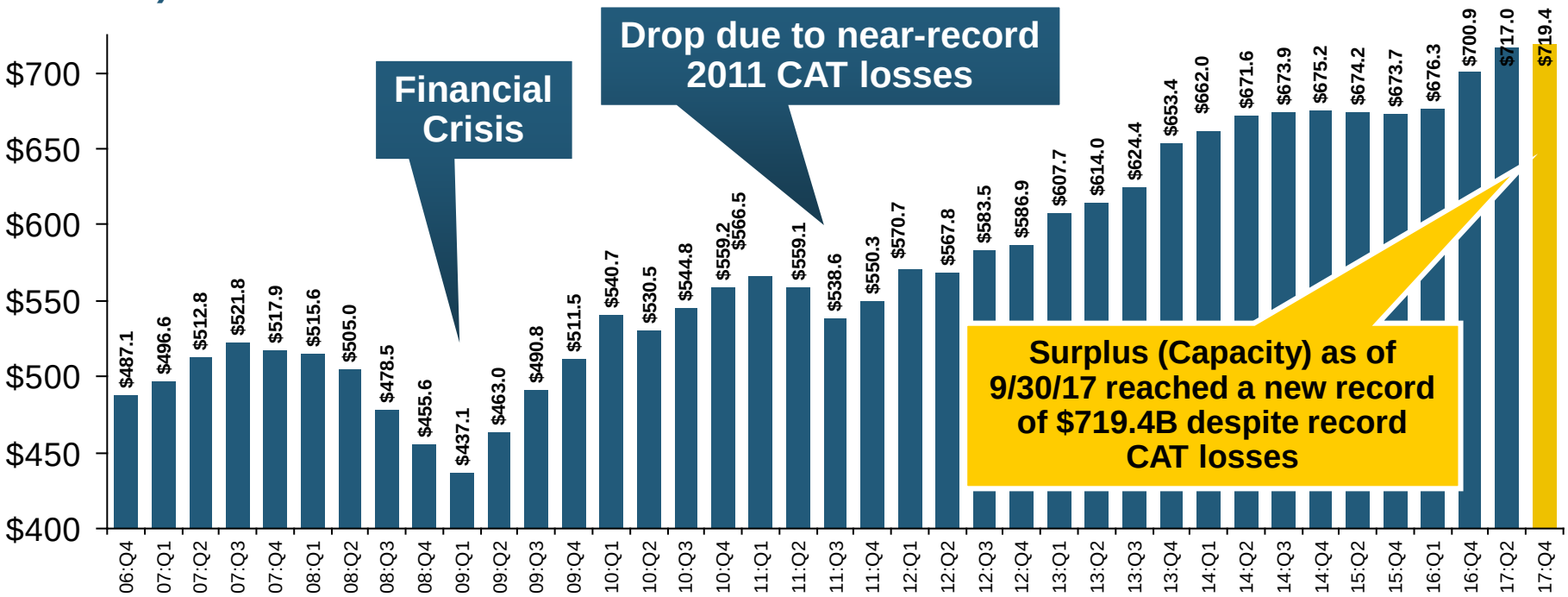
Commercial Lines Combined Ratio, 1990-2017F*



*2007-2012, 2017 figures exclude mortgage and financial guaranty segments. 17E = actual 9 mo. YTD figure of 106.2.
Source: A.M. Best (1990-2016); ISO (2017E).

Policyholder Surplus, 2006:Q4–2017:Q3

($ Billions)



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 .

Capacity/Capital "shocks" typically do not on their own drive a sustained firming of the pricing environment

Sources: ISO, A.M .Best; 2018 estimate from the Center for Risk and Uncertainty Management, University of South Carolina.

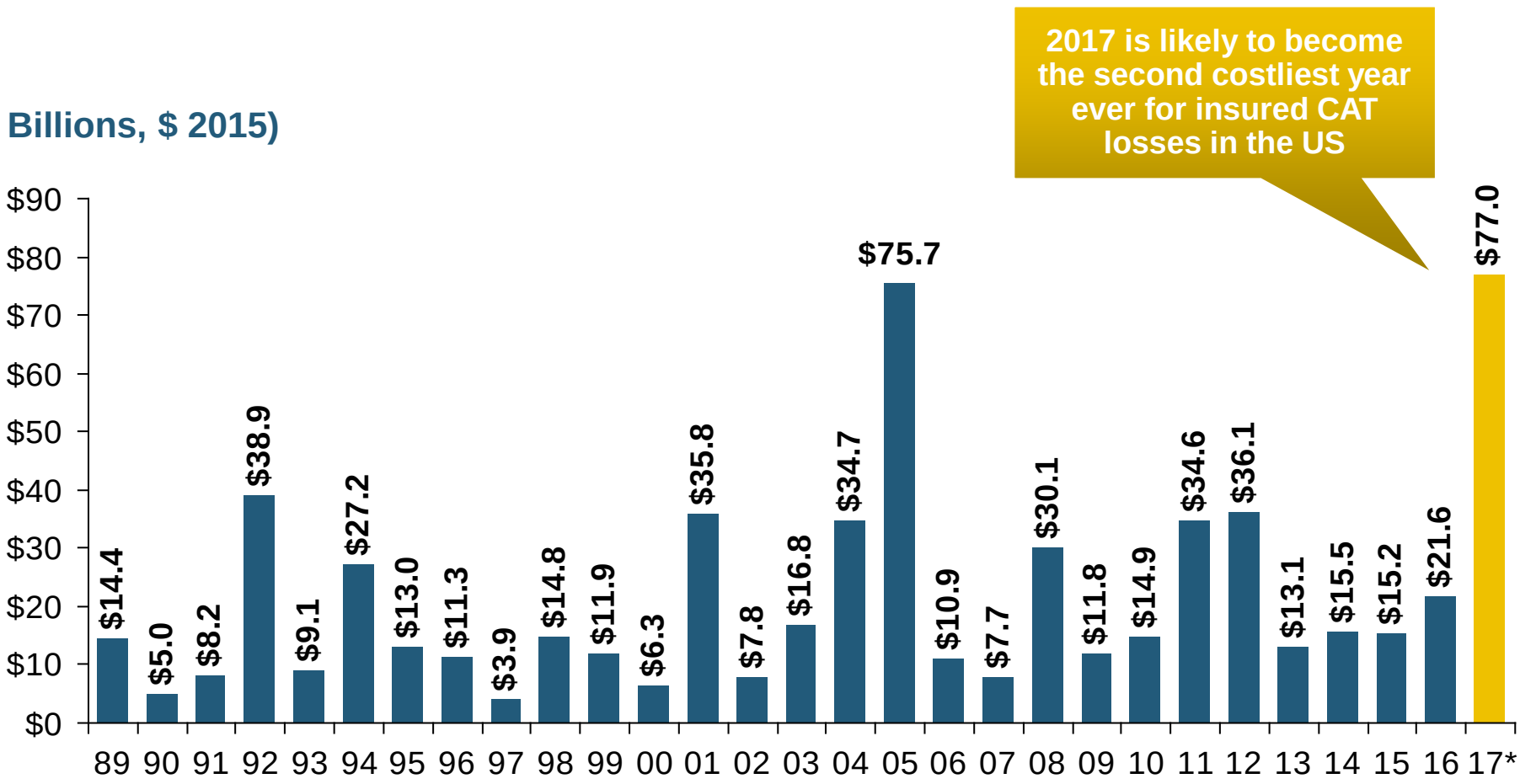
Catastrophe Loss Update: *Major Driver of Rate Pressure*

2017 Was One of the Costliest Years Ever for US Insurers

Hurricanes Harvey, Irma and Maria, California Wildfires Exact a Huge Toll

U.S. Insured Catastrophe Losses, 1989 – 2017 YTD*

($ Billions, $ 2015)



*As of Dec. 31, 2017. Stated in 2017 dollars. Excludes NFIP losses.

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.)

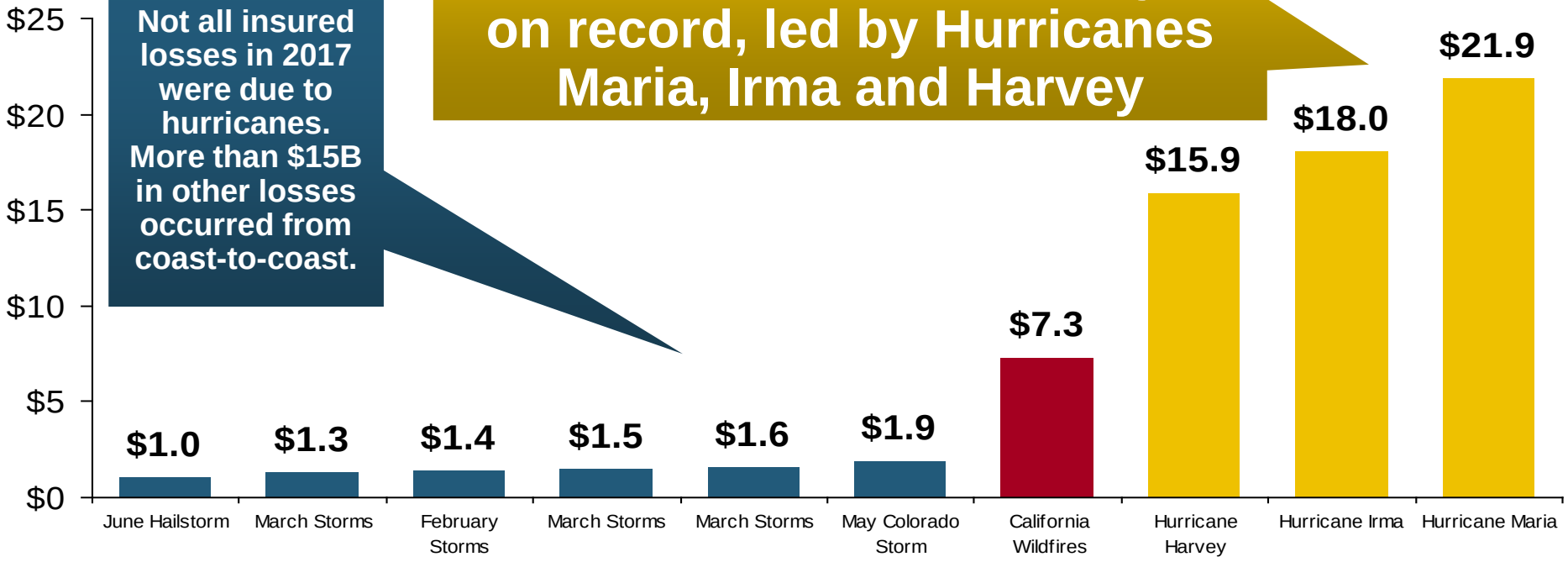
Sources: Property Claims Service/ISO; Insurance Information Institute.

Top 10 US Catastrophe Losses of 2017, by Insured Loss

(Insured Losses, 2017 Dollars, $ Billions)*

YTD insured CAT losses in the US totaled $72 billion by late 2017, the second costliest year on record, led by Hurricanes Maria, Irma and Harvey

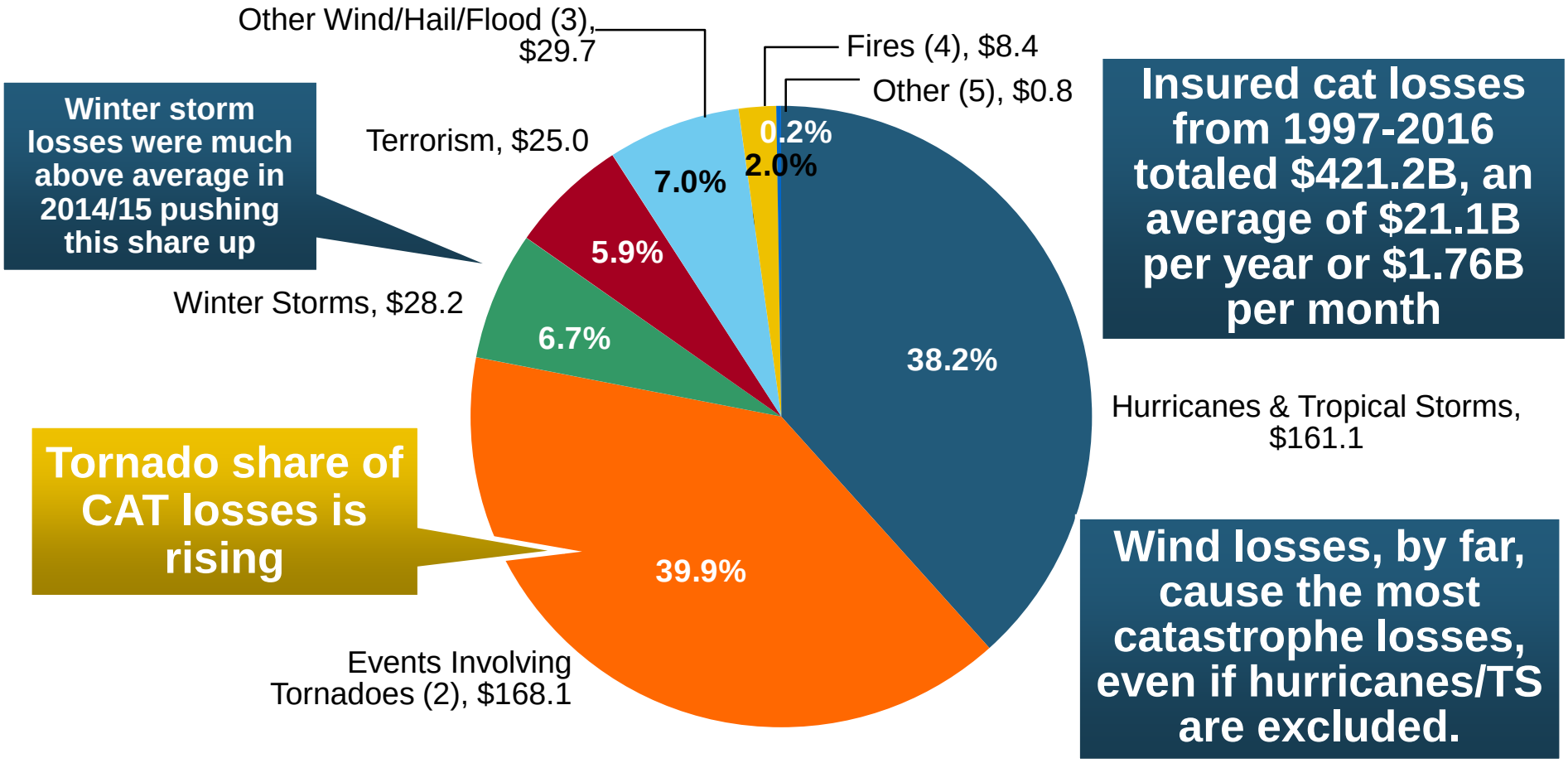
Not all insured losses in 2017 were due to hurricanes. More than $15B in other losses occurred from coast-to-coast.



*As of Nov. 14, 2017.

Sources: PCS; Insurance Insider: http://www.insuranceinsider.com/-1270818/9.

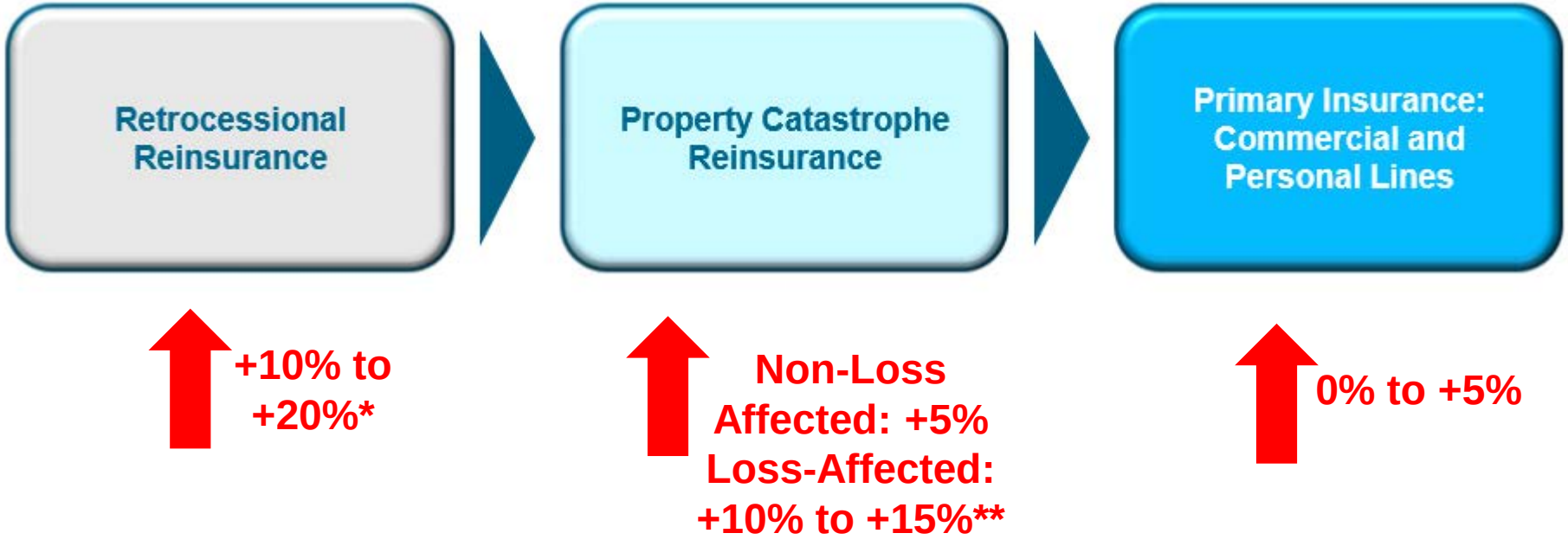
Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1997–2016[1]



1. Catastrophes are defined as events causing direct insured losses to property of $25 million or more in 2016 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.

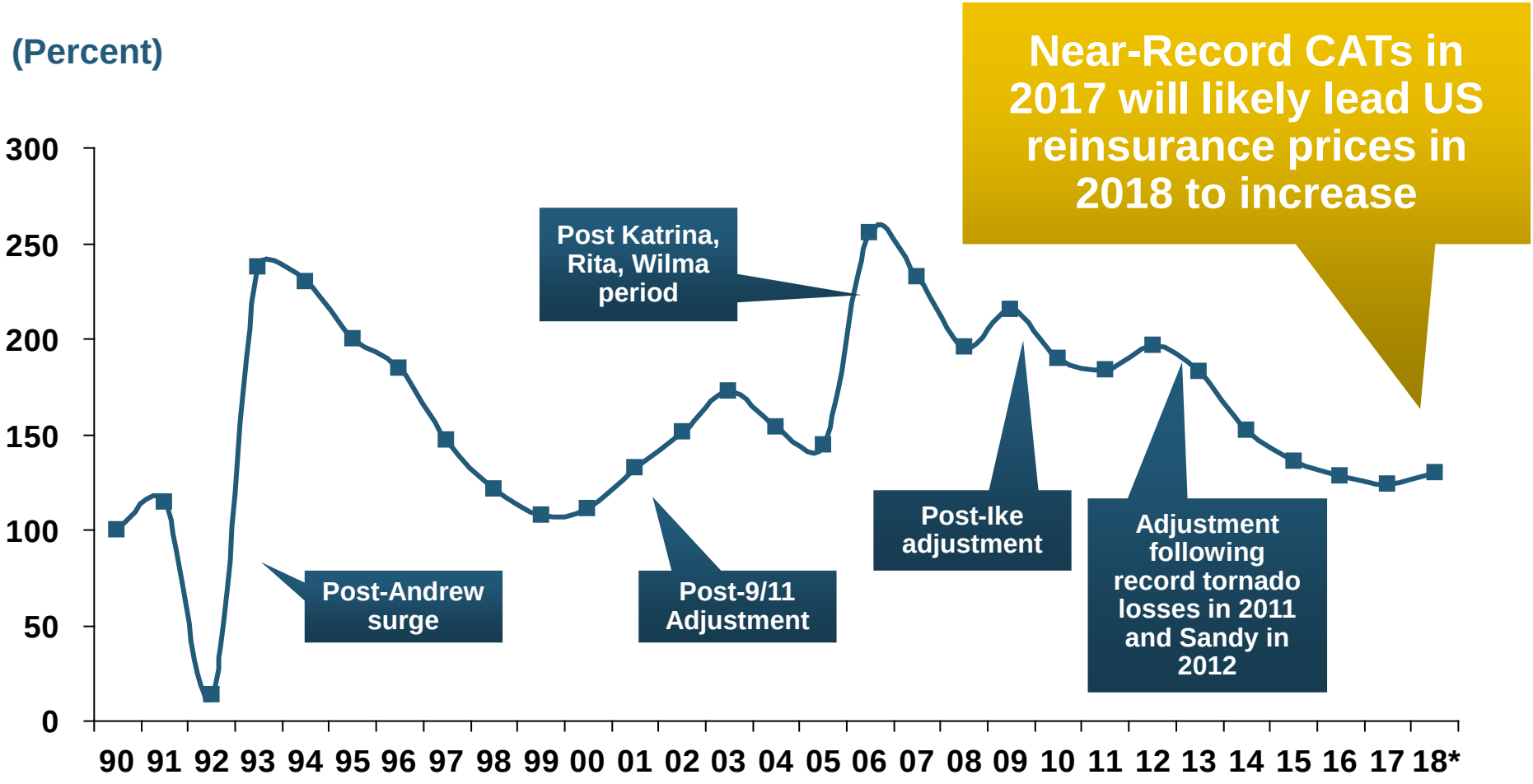
Origins of Pricing Pressure Arising from (Near) Record CAT Activity



Retrocessional Reinsurance markets (reinsurance for reinsurance companies) are pushing pressure through the reinsurance markets and into both commercial and personal lines

*Some programs above and below this range.
**Higher end of range applies to loss-affected accounts.
Sources: Adapted from Barclay's Capital research.

US Property Catastrophe Rate-on-Line Index: 1990 – 2018*



US Reinsurance Pricing Is Sensitive to CAT Activity and Ultimately Impacts Primary Insurance Pricing, Terms and Conditions

*As of January 1 each year. 2018 is a full-year estimate (Barclay's Capital).

Source: Guy Carpenter; Artimes.bm accessed at: http://www.artemis.bm/indices/regional-property-cat-rate-on-line-index.html

INVESTMENTS: THE NEW REALITY

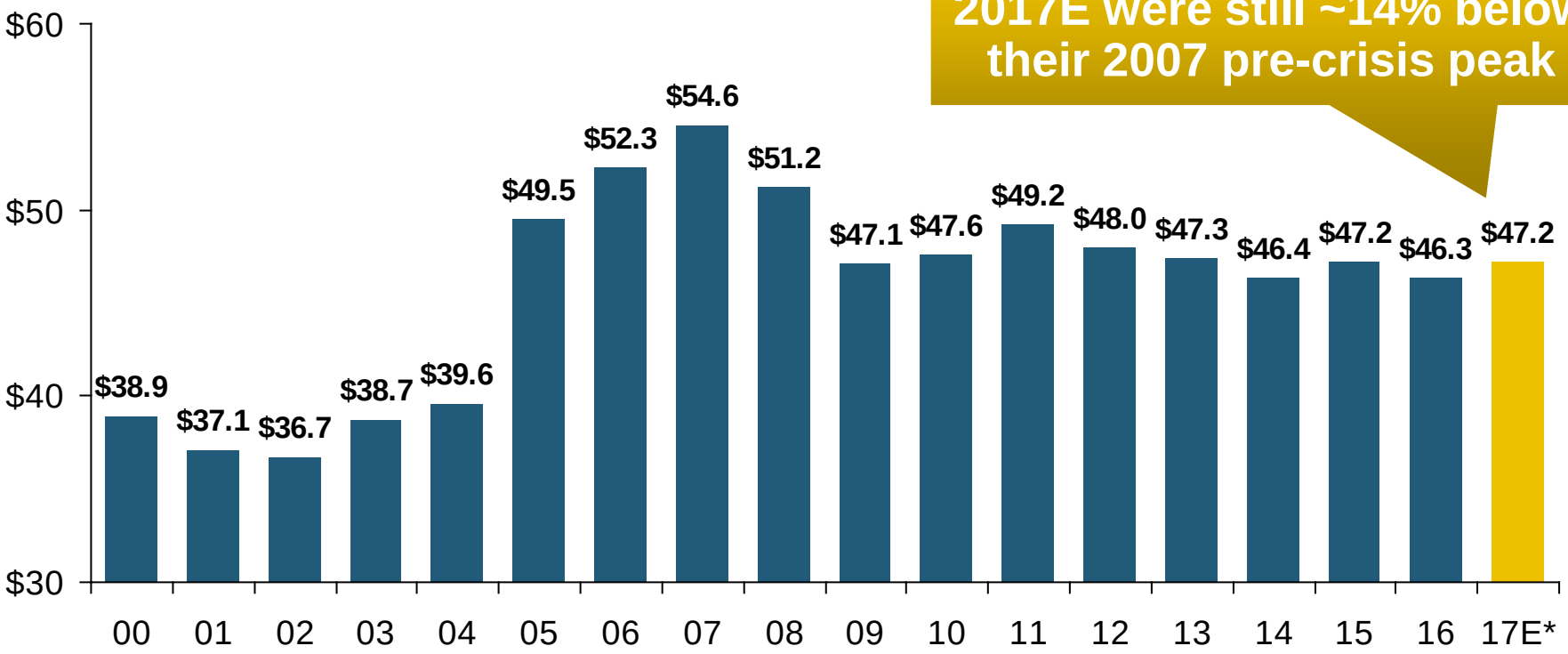
Investment Performance is a Key Driver of Insurer Profitability

The "Trump Bump" Has Lifted Stock Markets and Interest Rates

Will the Gains Help Insurers?

Property/Casualty Insurance Industry Investment Income: 2000–2017E*

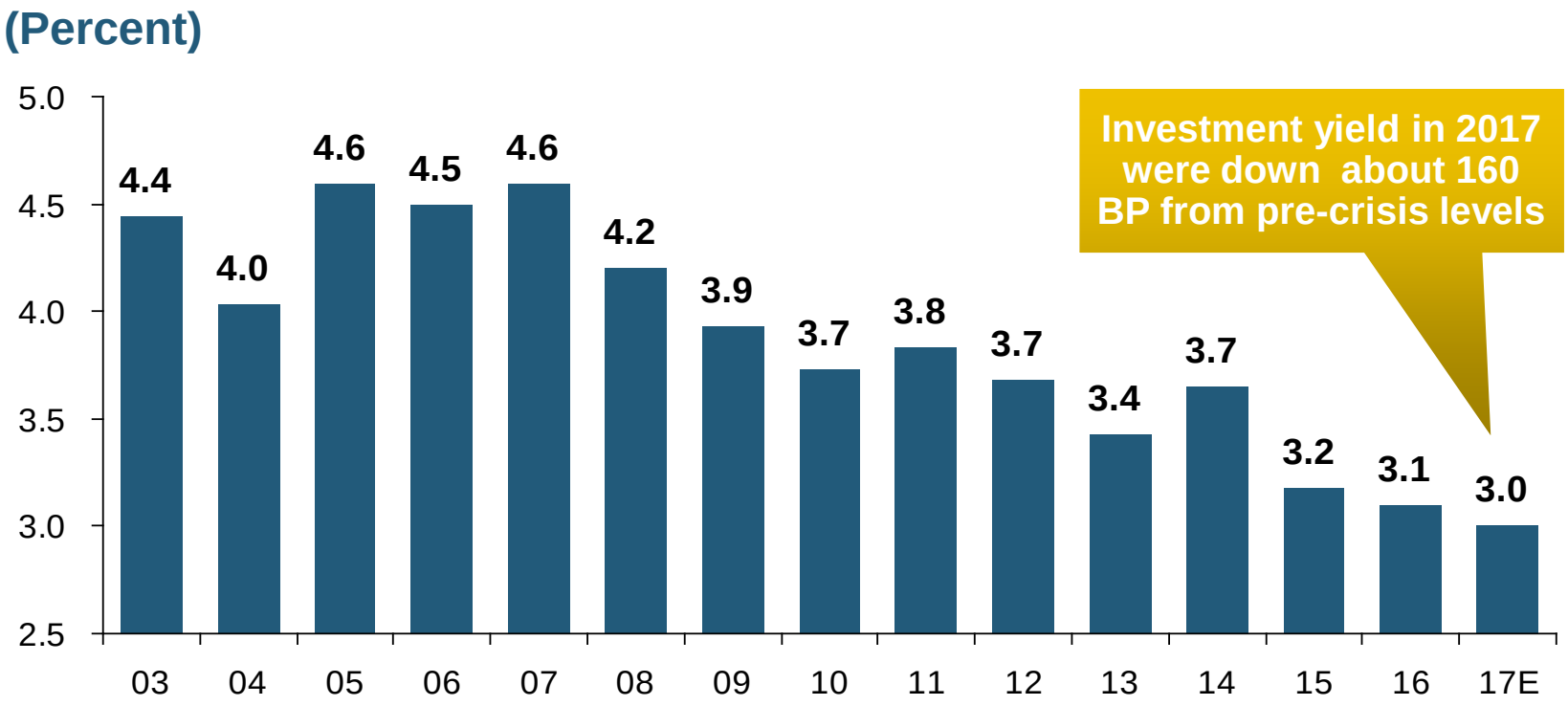
($ Billions)



Due to persistently low interest rates, investment income fell in 2012, 2013 and 2014 but showed a small (1.7%) increase in 2015—though 2016 experienced another decline. Up ~2% in 2017.

[1] Investment gains consist primarily of interest and stock dividends. Sources: ISO; Insurance Information Institute.
*2017 estimate based on annualized $35.4B actual figure through Q3 2017.

Net Investment Yield on Property/ Casualty Insurance Invested Assets, 2007–2017E*



The yield on invested assets remains low relative to pre-crisis yields. Fed rate increases beginning in late 2015 have pushed up some yields, albeit quite modestly. Shrinking of Fed's balance sheet should help too in 2018 and beyond.

Sources: NAIC data, sourced from S&P Global Market Intelligence; 2017estimate is based on ISO data through Q3 2017.

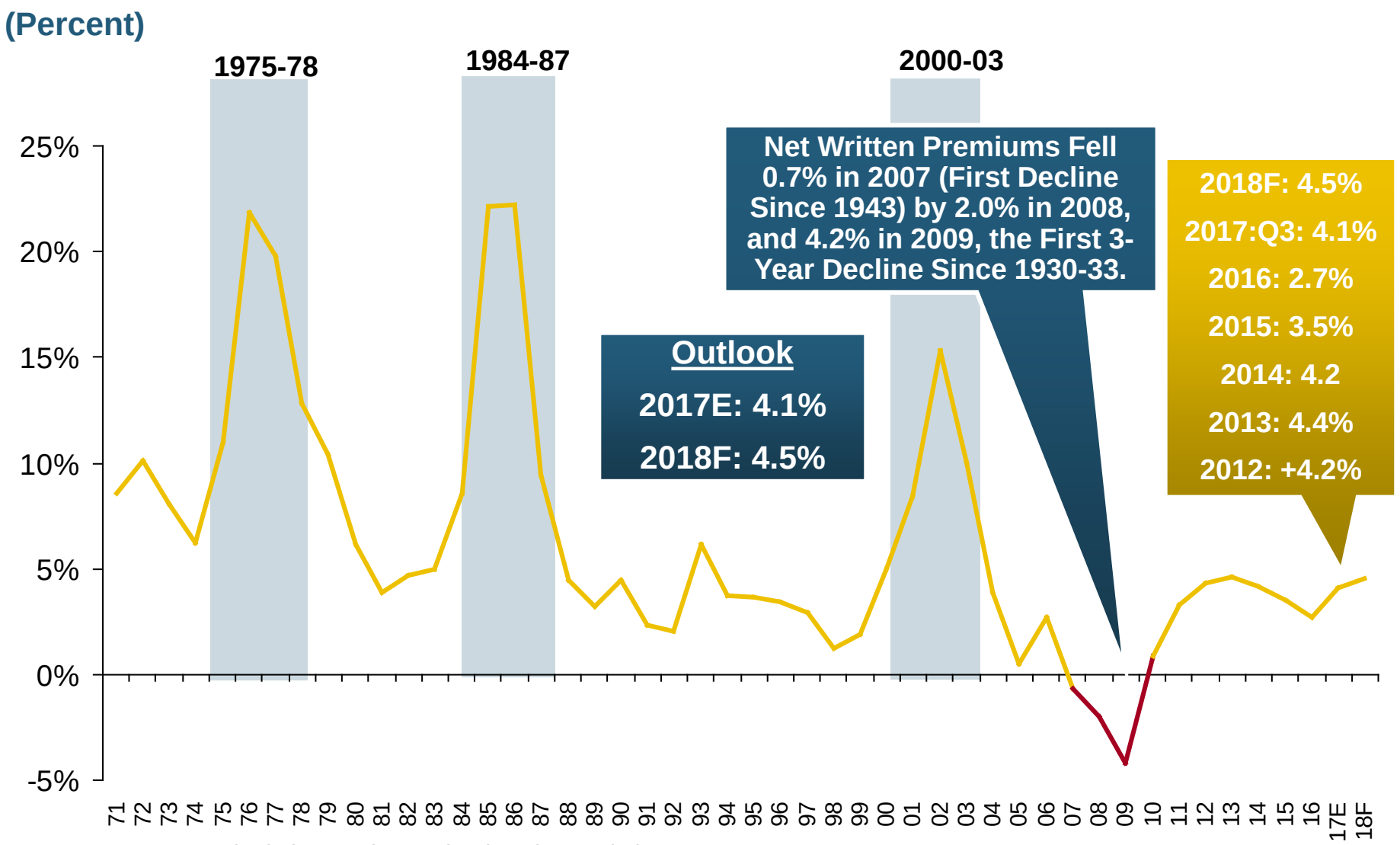
Brief P/C Insurance Growth Overview and Outlook

Drivers of Growth in 2018

Economic Growth Fuels Exposure & Record CAT Losses Are Pressuring Rates

Price Competition Remains Rational While Others Look Towards M&A

Net Premium Growth (All P/C Lines): Annual Change, 1971—2018F

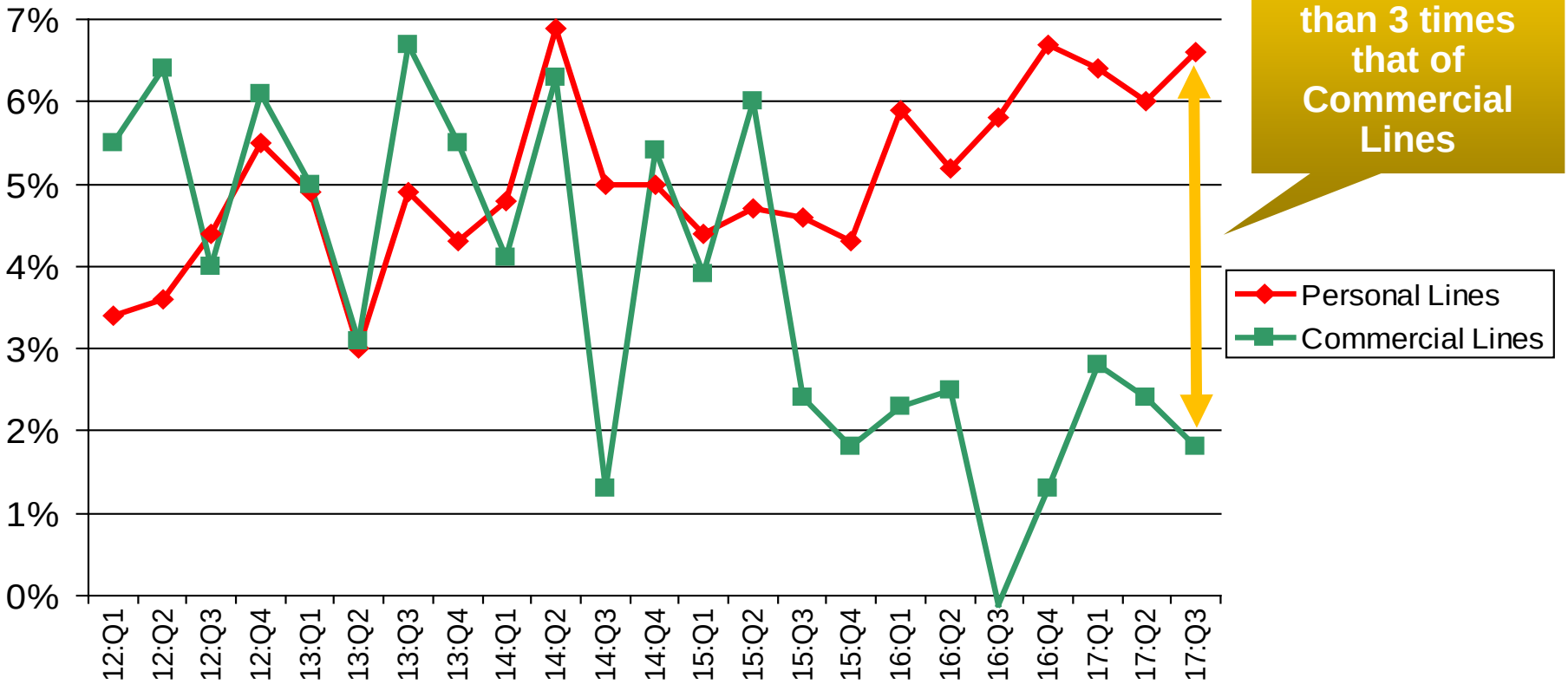


*Q3:2017 over Q3:2016. Shaded areas denote "hard market" periods

Sources: A.M. Best (1971-2013), ISO (2014-16).

Y-o-Y Growth Rates, Direct Premiums Written, Commercial vs. Personal Lines,

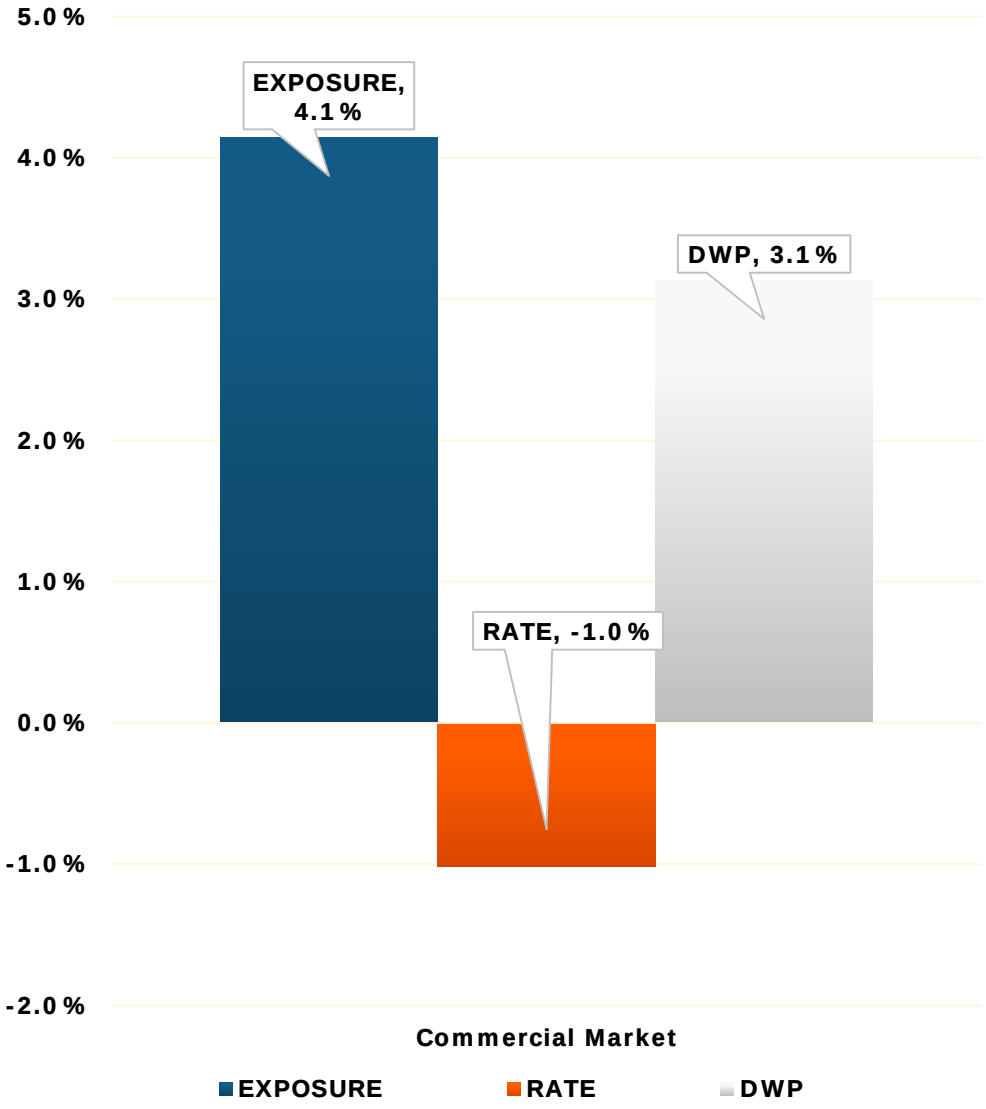
2012:Q4 - 2017:Q3



Since 2014, personal lines Direct Premiums Written have generally grown faster than commercial lines DPW, and that growth has been less volatile.

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

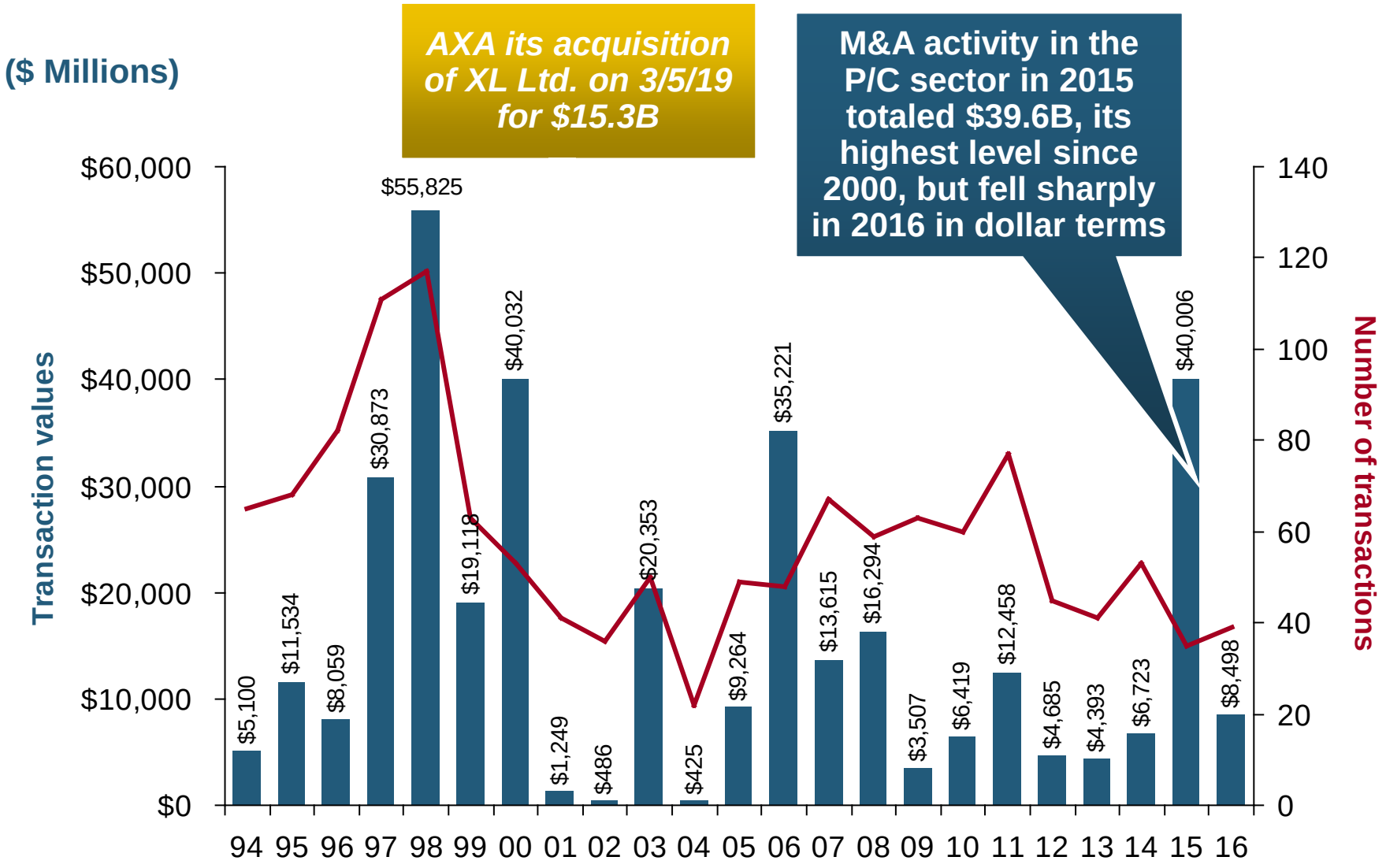
2016: Components of Commercial DWP Growth



- Direct Written Premium (DWP) in US lines covered by ISO MarketStance grew 3.1 percent in 2016
- Soft market conditions counteracted moderate 4.1 percent exposure growth
- Anecdotal evidence: insureds spent rate reductions on new/broader coverages (CIAB, 2017).

Source: Verisk Insurance Solutions.

U.S. INSURANCE MERGERS AND ACQUISITIONS, P/C SECTOR, 1994-2016 (1)



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

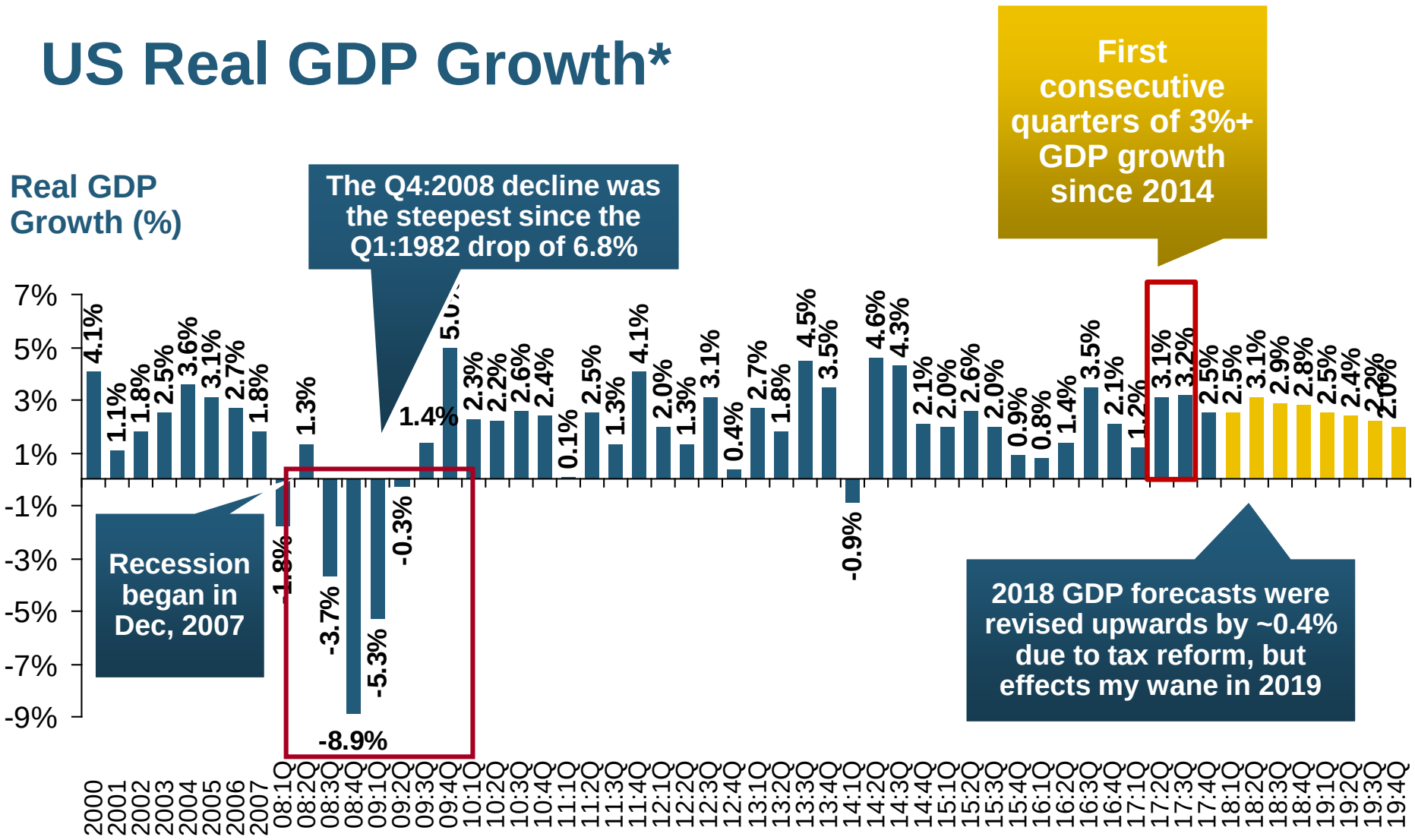
Source: Conning proprietary database.

THE ECONOMY

The Strength of the Economy Will Greatly Influence Growth in Insurers' Exposure Base Across Most Lines

Claiming Behavior Is Influenced by the Economy as Well

US Real GDP Growth*



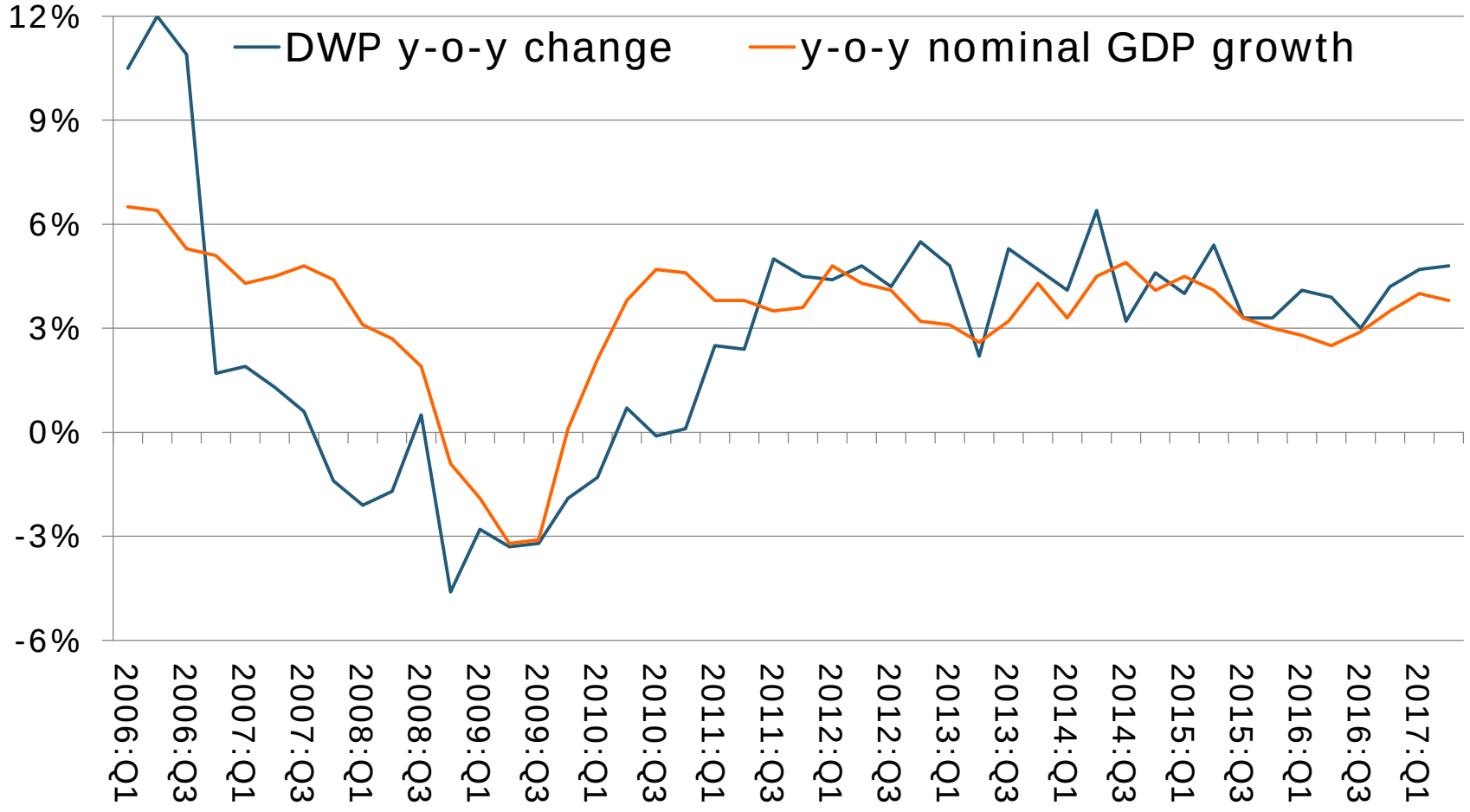
Demand for Insurance Should Increase in 2018-19 as GDP Growth Continues at a Steady and Perhaps Accelerating Pace and Gradually Benefits the Economy Broadly

* Estimates/Forecasts from Blue Chip Economic Indicators.

Source: US Department of Commerce, Blue Economic Indicators 3/18; Insurance Information Institute.

The Economy Drives P/C Insurance Industry Premiums: 2006:Q1 – 2017:Q2

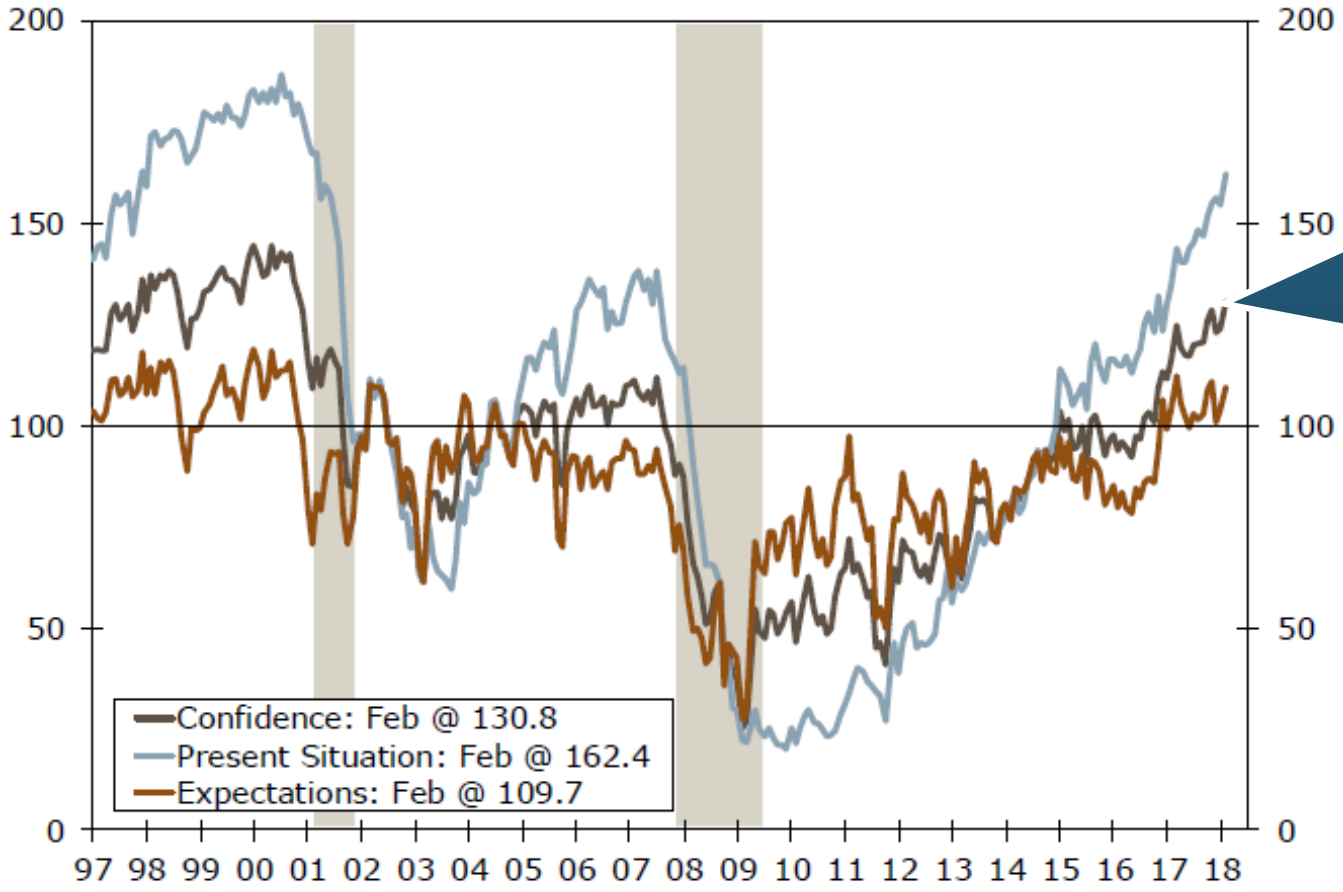
Direct Premium Growth (All P/C Lines) vs. Nominal GDP: Quarterly Y-o-Y Pct. Change



Direct Written Premiums track Nominal GDP—not quarter by quarter but overall fairly well.

Sources: SNL Financial; U.S. Commerce Dept., Bureau of Economic Analysis; I.I.I.

Consumer Confidence Index: Jan. 1987 – Feb. 2018

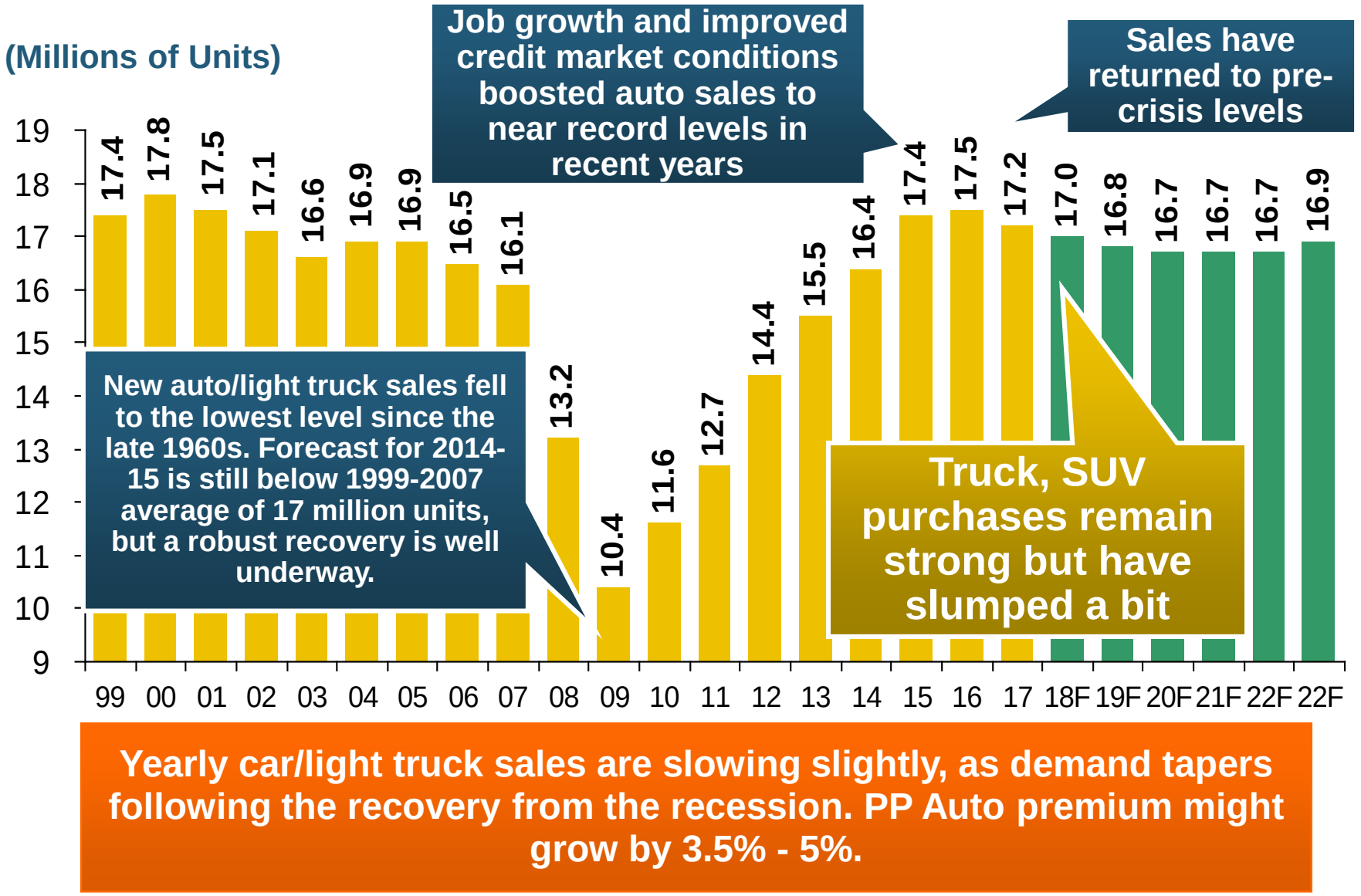


The Conference Board's Consumer Confidence Index stood at 130.8 in Dec., a post-recession high

Outlook: Consumers are optimistic about the future, which is consistent with expectations for stronger economic growth (consumers account for nearly 70% of all spending in the economy). Should positively influence growth of insurable exposures.

Source: The Conference Board; Wells Fargo Research.

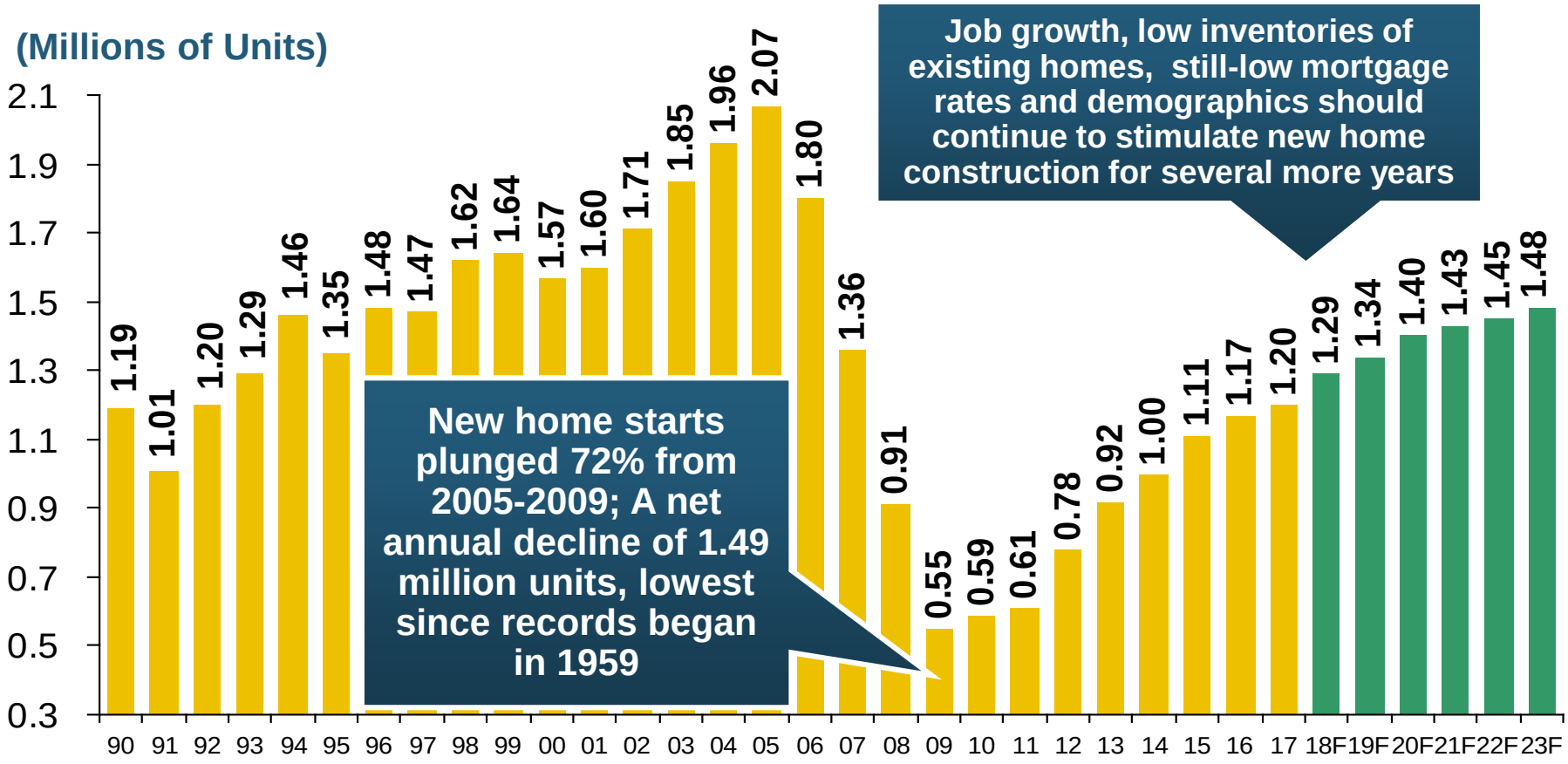
Auto/Light Truck Sales, 1999-2023F



Yearly car/light truck sales are slowing slightly, as demand tapers following the recession. PP Auto premium might grow by 3.5% - 5%.

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (3/18 for 2018-19; 10/17 for 2019-23F; Insurance Information Institute

New Private Housing Starts, 1990-2023F



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 (3/18 for 2018-19; 10/17 for 2019-23F; Insurance Information Institute.

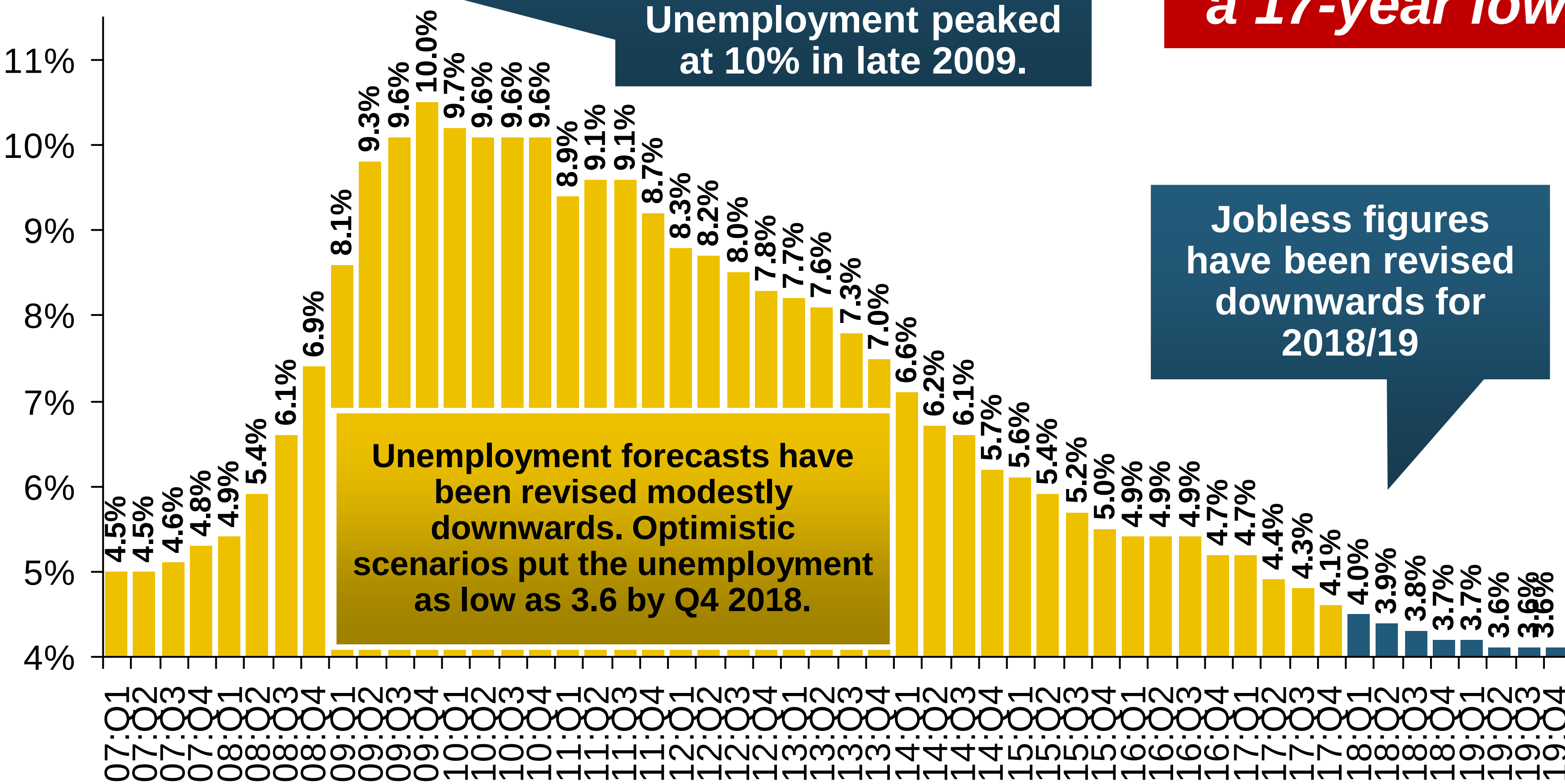
US Unemployment Rate Forecast

2007:Q1 to 2019:Q4F*

Rising unemployment eroded payrolls and WC's exposure base.

Unemployment peaked at 10% in late 2009.

The Feb. 2018 unemployment rate was 4.1%, a 17-year low



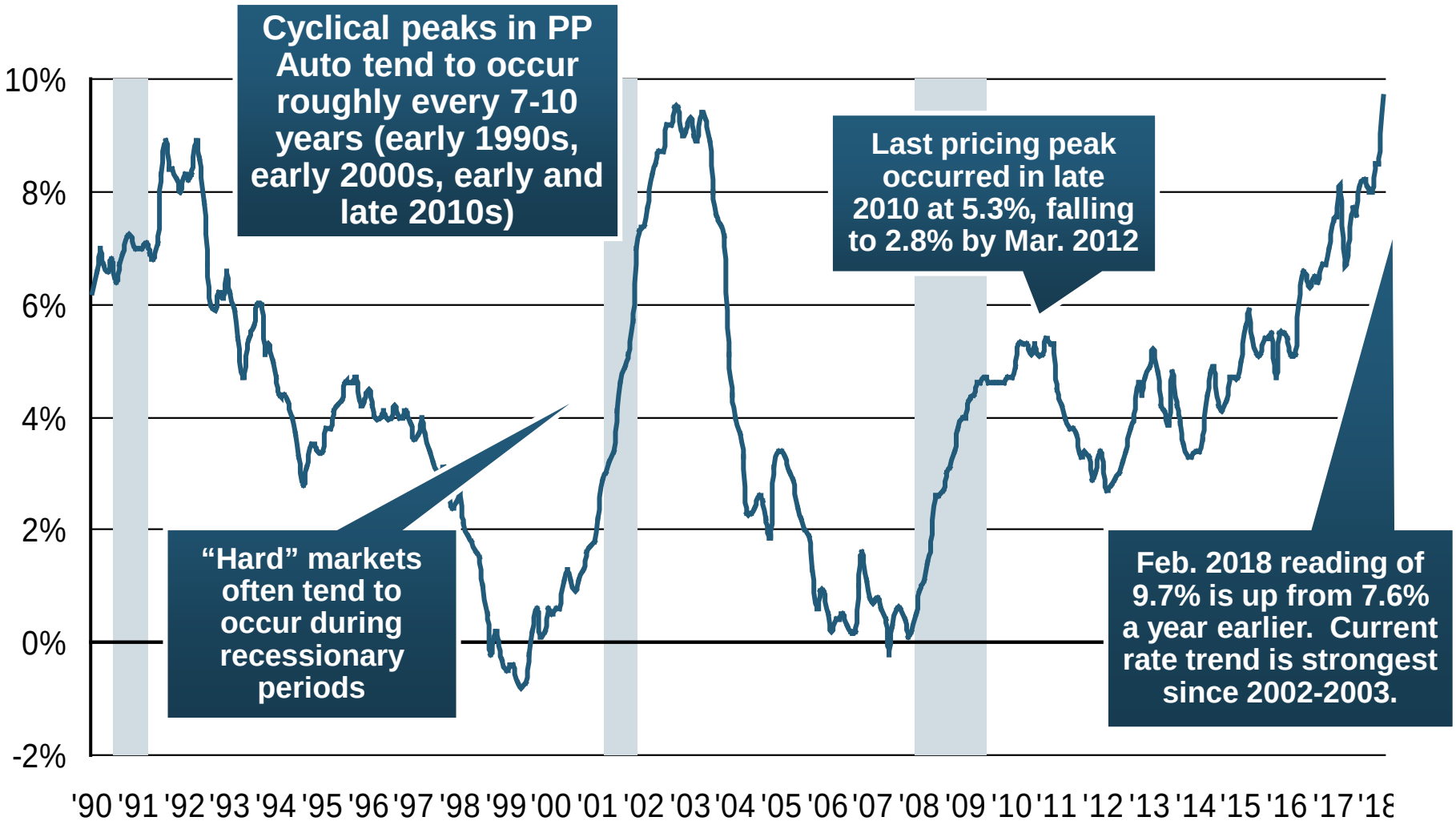
* = actual; = forecasts

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (3/18 edition); Insurance Information Institute.

Personal Lines Growth Drivers

Rate and Exposure are Both Presently Important Growth Drivers

Monthly Change in Auto Insurance Prices, 1991–2018*

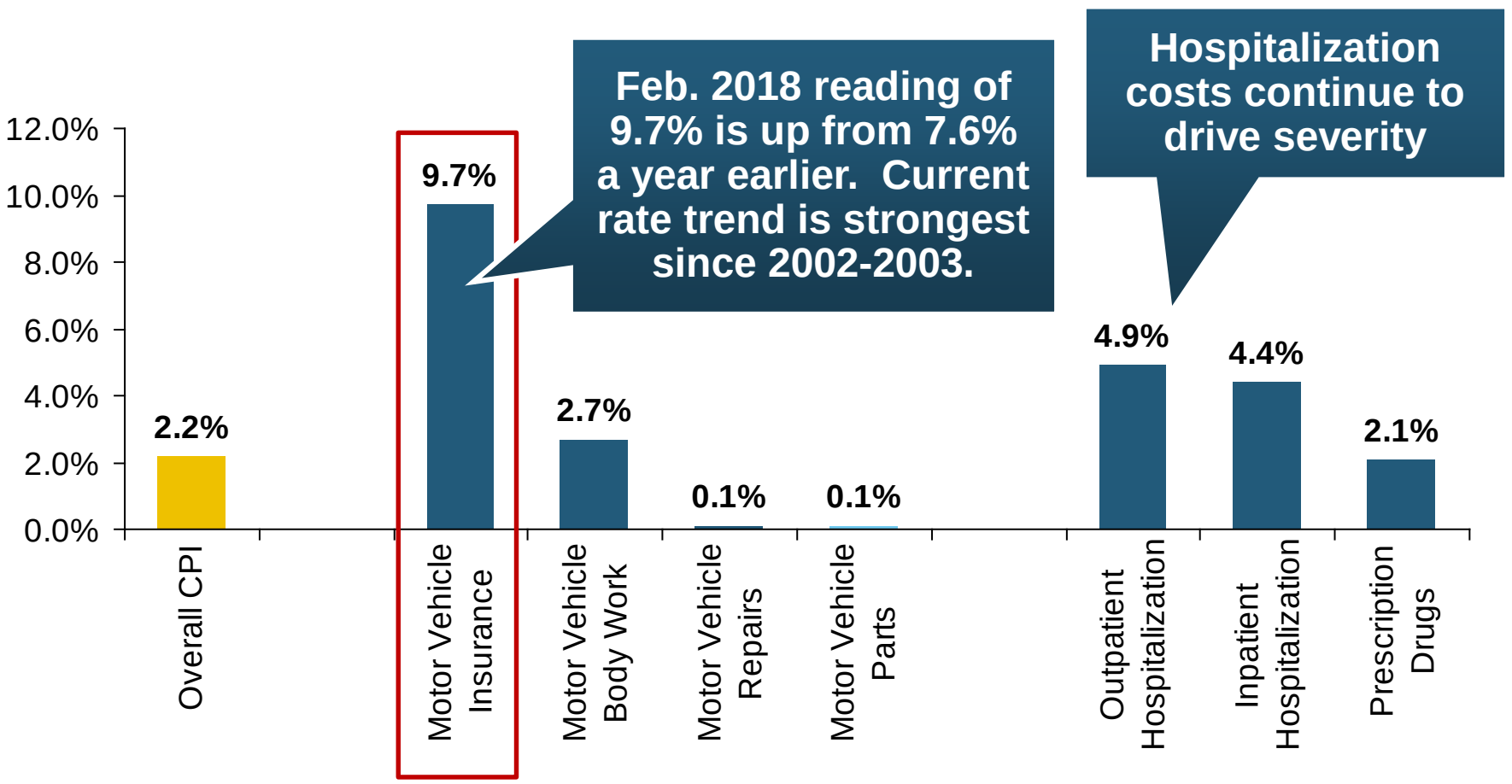


*Percentage change from same month in prior year; through Feb. 2018; seasonally adjusted

Note: Recessions indicated by gray shaded columns.

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

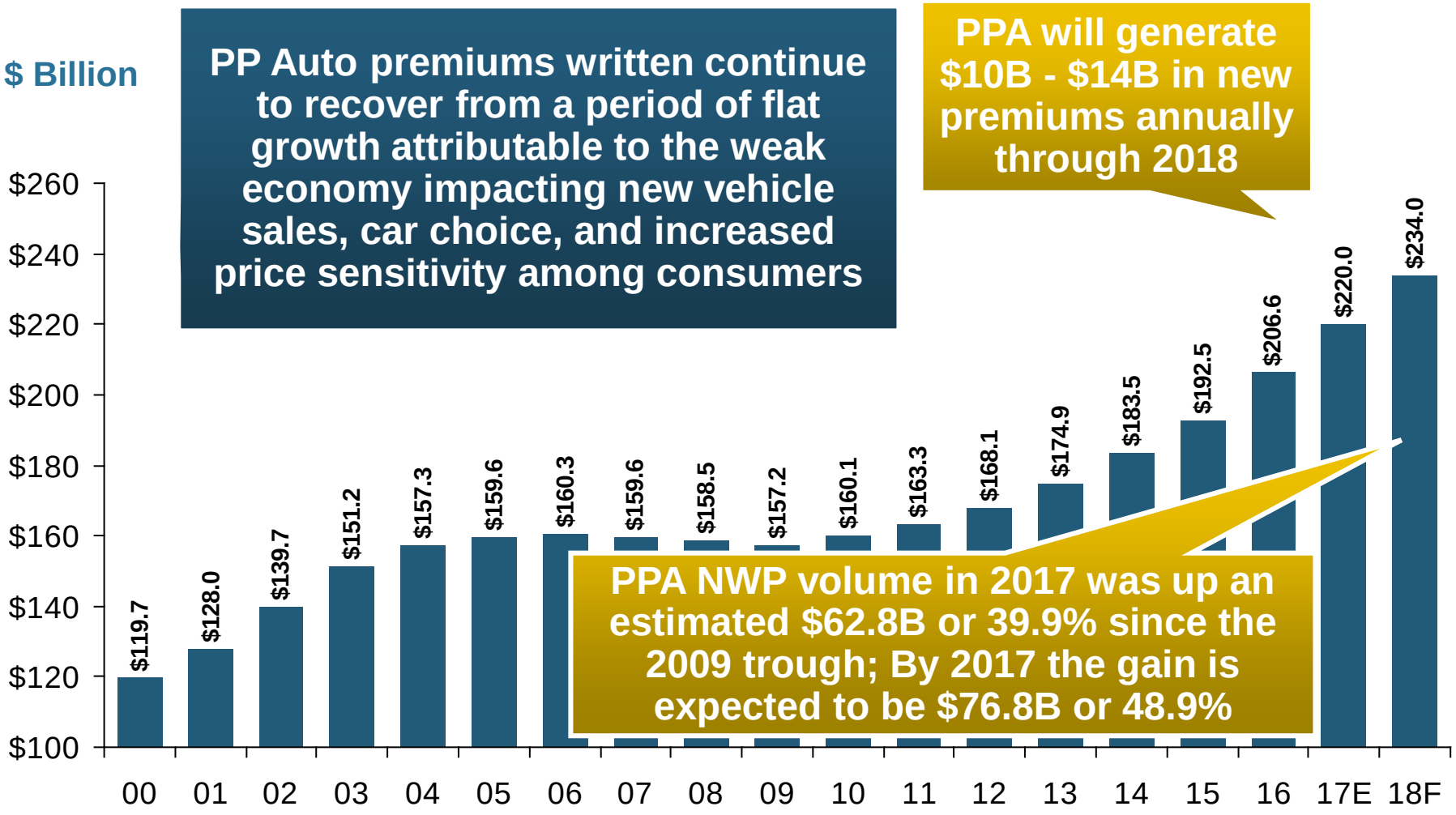
Personal Auto Insurance: Key CPI Cost Component Changes: 2018 vs. 2017*



* February 2018 vs. February 2017.

Source: US Bureau of Labor Statistics; USC Center for Risk and Uncertainty Management.

Private Passenger Auto Insurance Net Written Premium, 2000–2018F

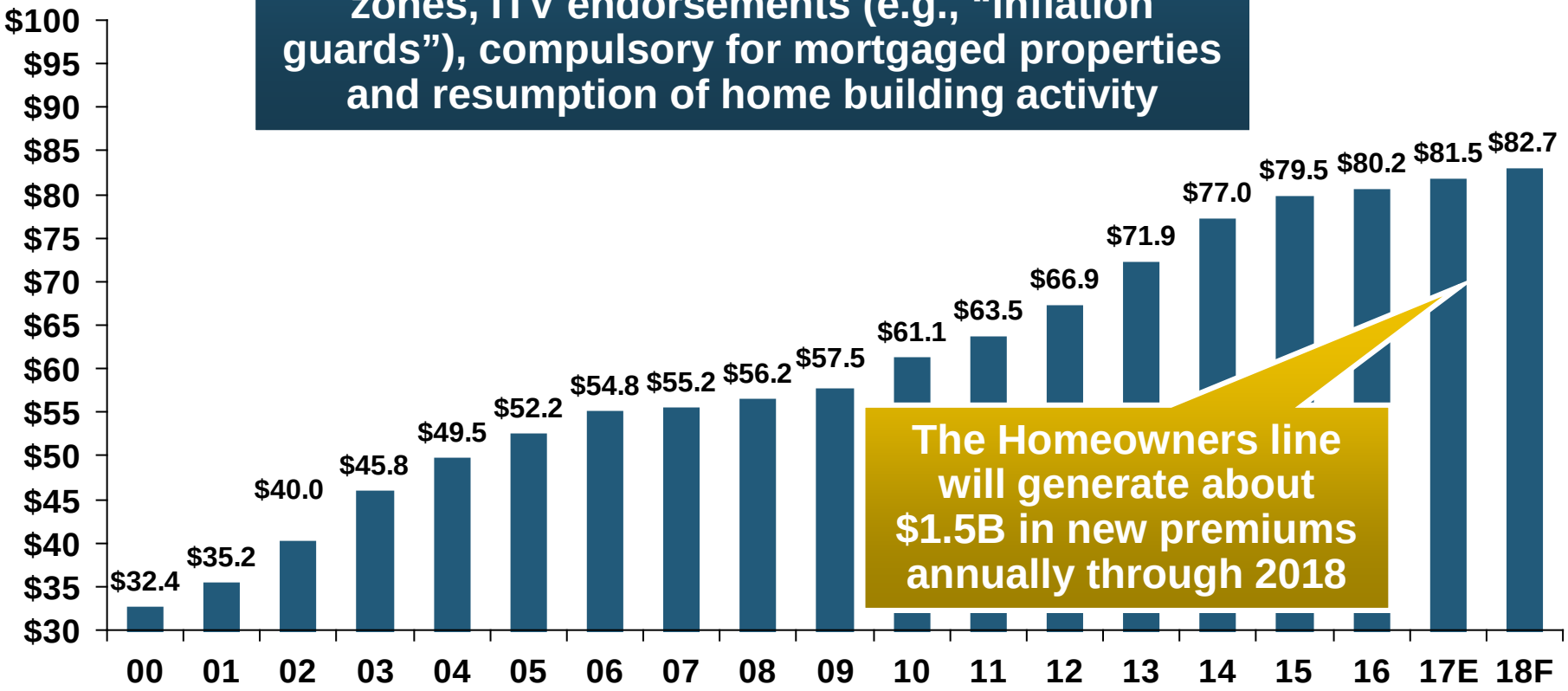


Sources: A.M. Best (1990-2016); USC RUM (2017F-2018F).

Homeowners Insurance
Net Written Premium, 2000–2018F

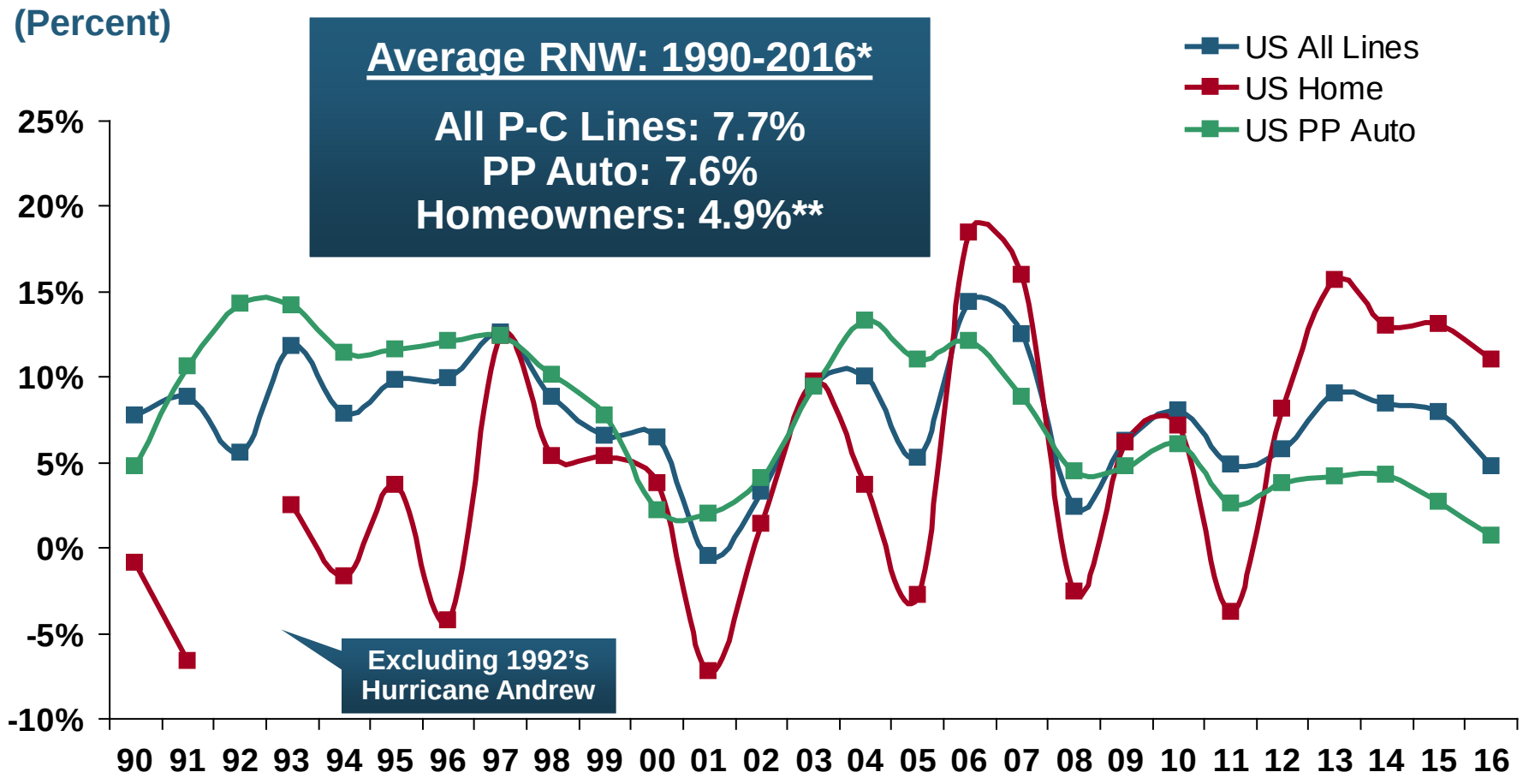
$ Billions

Homeowners insurance NWP continues to rise (up 152% 2000-2017E) 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



Sources: A.M. Best; USC RUM Center.

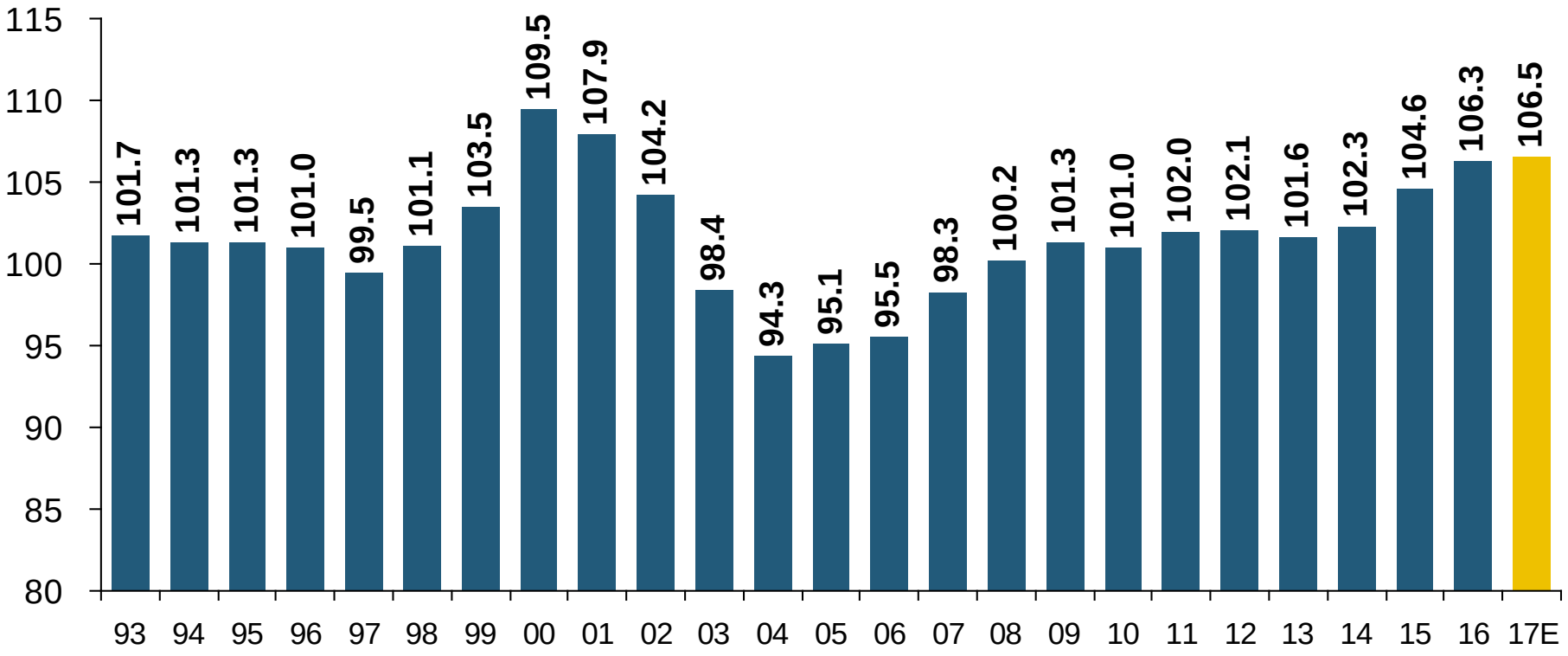
Return on Net Worth: All P-C Lines vs. Homeowners & Pvt. Pass. Auto, 1990-2016*



Homeowners is Now Outperforming Pvt.Pass. Auto and P-C Industry as a Whole. HO 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 2.2%
Sources: NAIC; Insurance Information Institute.

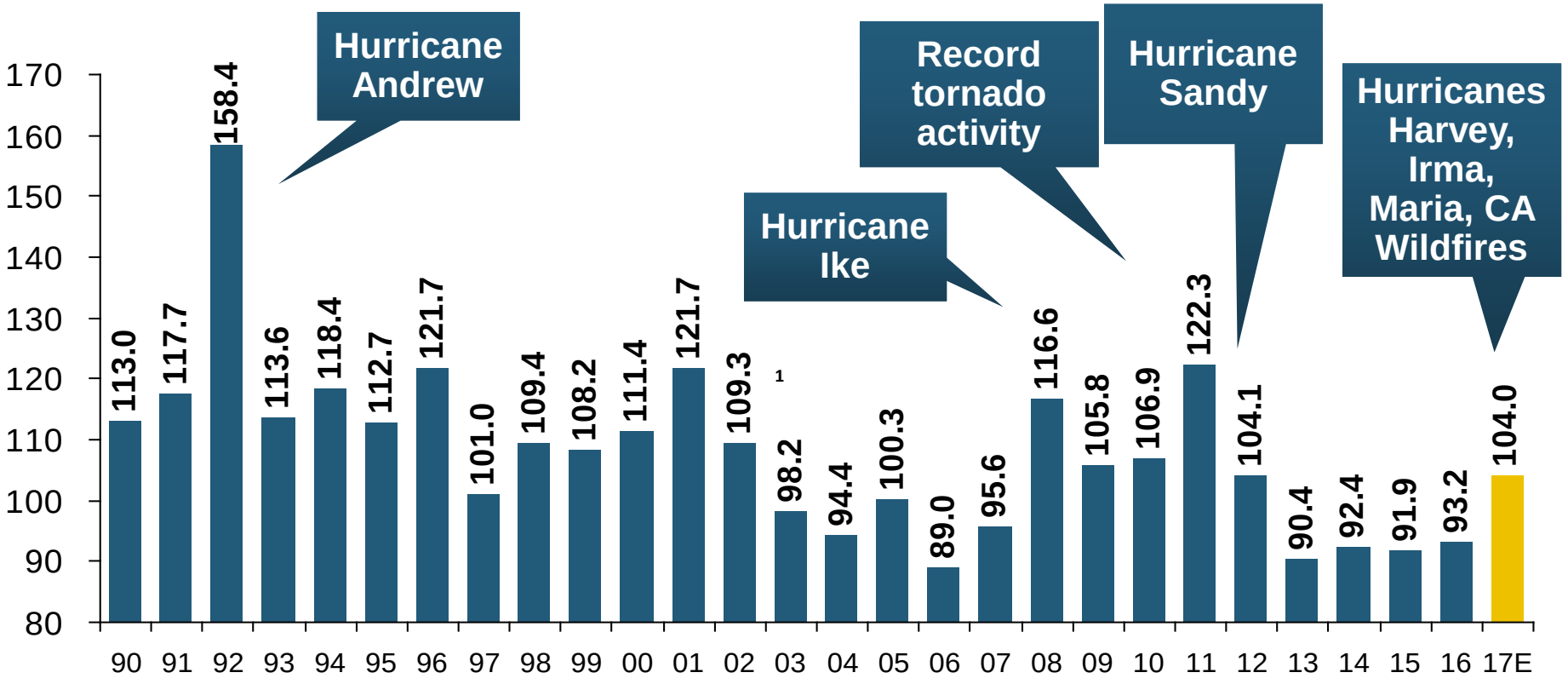
Private Passenger Auto Combined Ratio: 1993–2017E



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

Sources: A.M. Best (1990-2016); USC RUM Center (2017E).

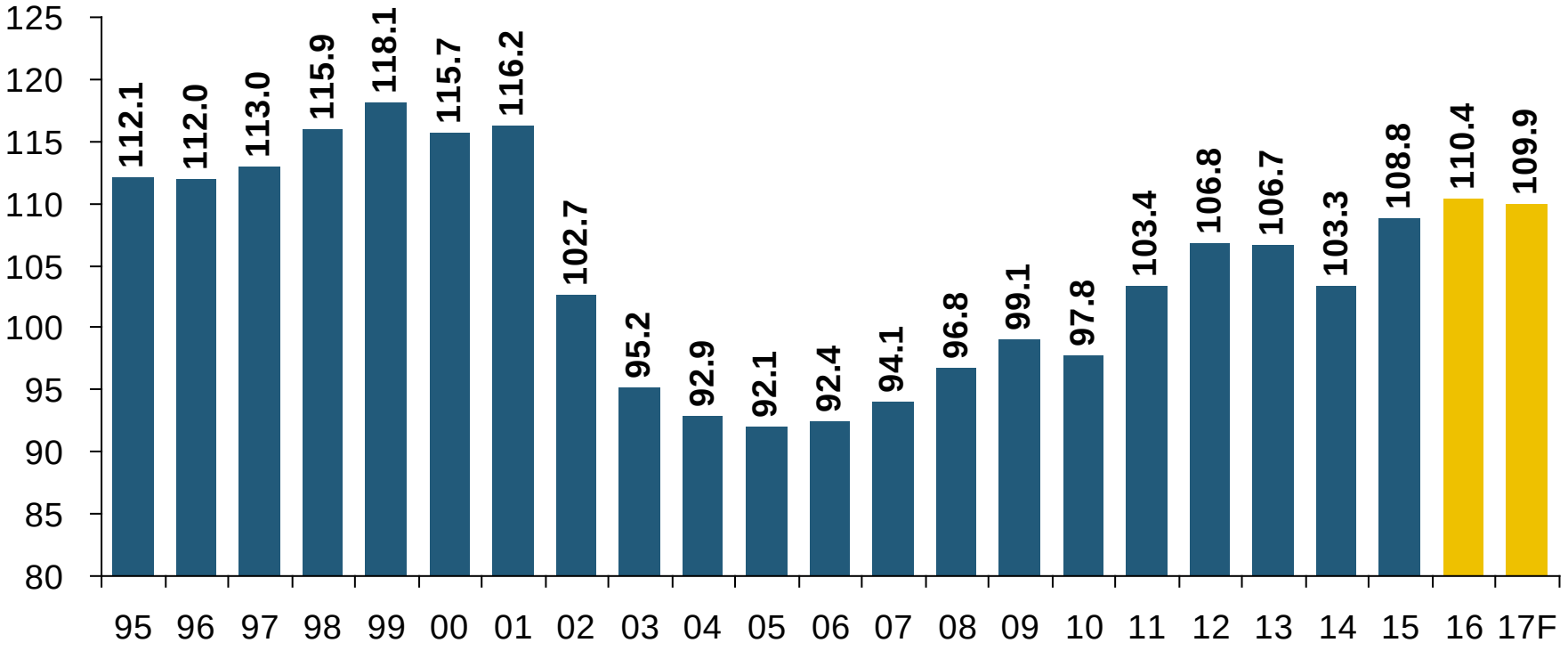
Homeowners Insurance Combined Ratio: 1990–2017E



Homeowners Performance Had Improved Markedly Since 2011/12's Large Cat Losses…until 2017's Record Catastrophe Loss Activity.

Sources: A.M. Best (1990-2016); USC RUM Center (2017E).

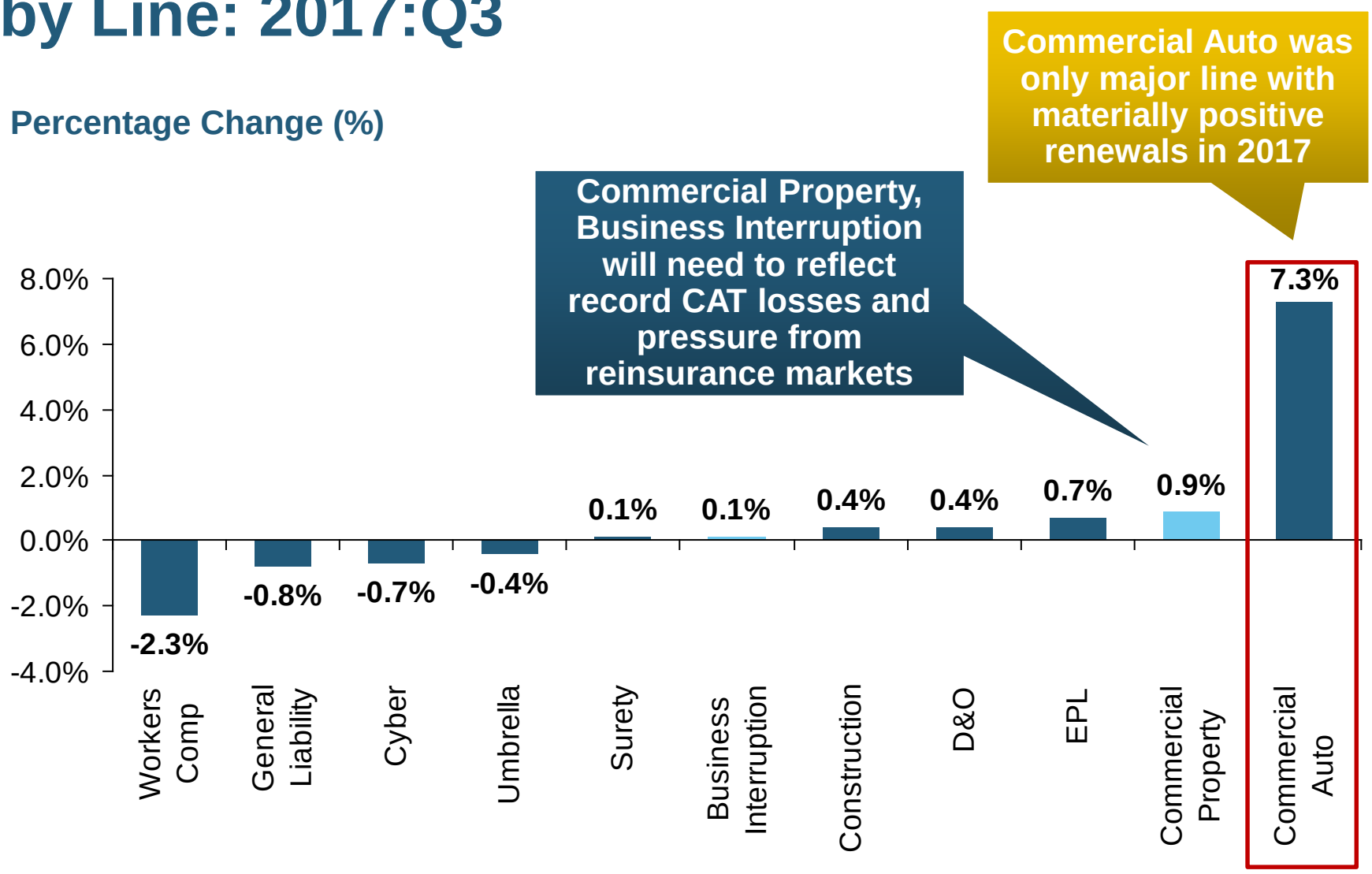
Commercial Auto Combined Ratio: 1993–2017F



Commercial Auto Results Are Challenged as Rate Gains Have Yet to Fully Offset Adverse Frequency and Severity Trends

Sources: A.M. Best (1990-2016); USC RUM Center (2017E).

Change in Commercial Rate Renewals, by Line: 2017:Q3



Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
Source: Council of Insurance Agents and Brokers; USC Center for Risk and Uncertainty Management.

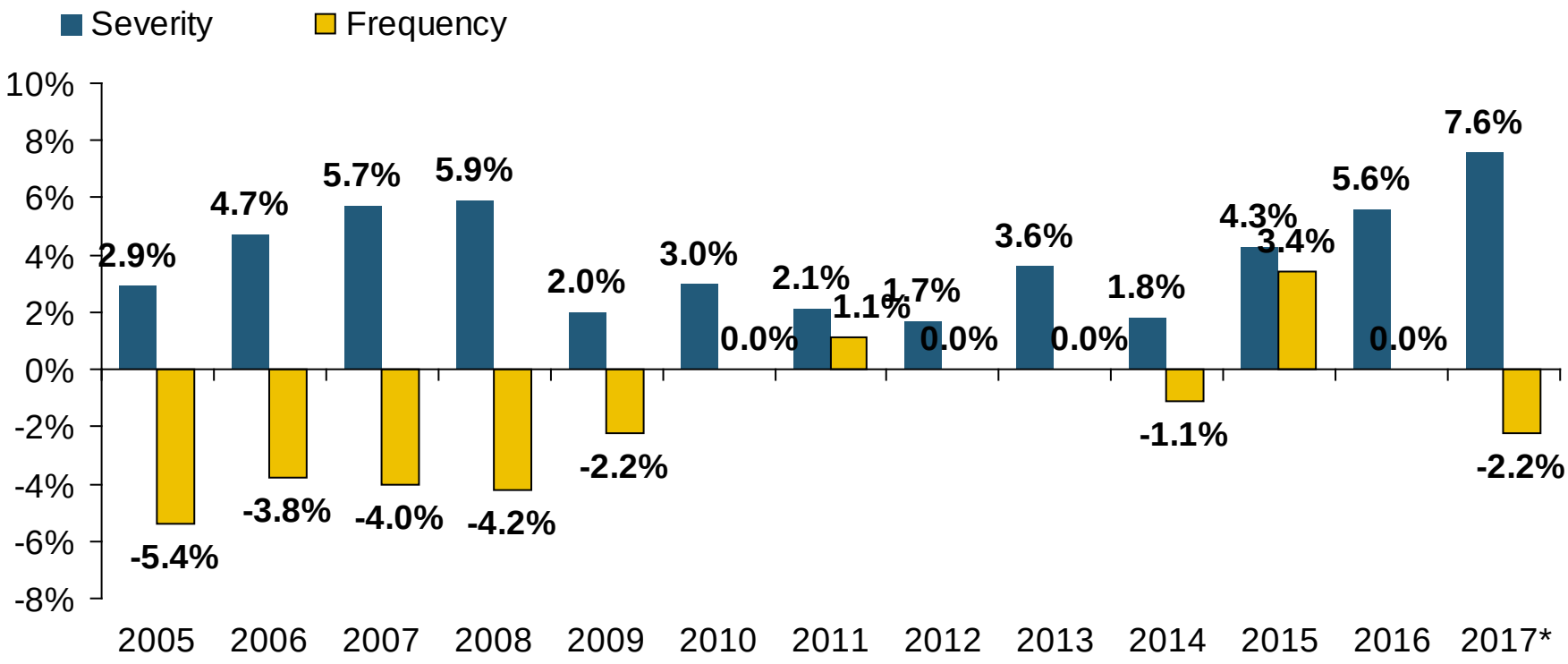
Claim Trends in Private Passenger Auto Insurance

Rising Frequencies and Severities in Many Coverages

Will that Pattern Be Sustained?

Bodily Injury: Severity Trend Is Up, Frequency Decline Returning?

Annual Change, 2005 through 2017*

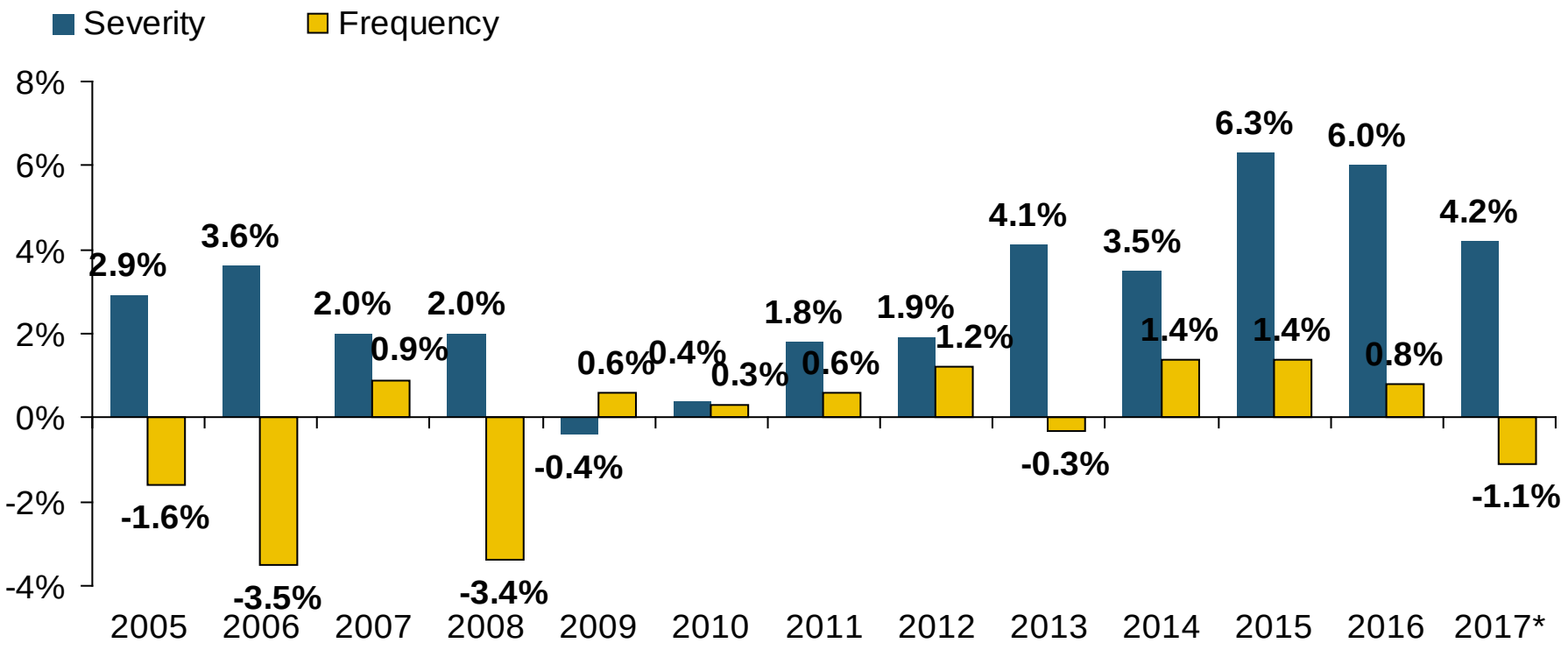


BI Severity Trend is a Major Cost Driver

*2017 figure is for the 4 quarters ending 2017:Q3.
Source: ISO/PCI *Fast Track* data; Insurance Information Institute

Property Damage Liability: Severity Up and Frequency Flat

Annual Change, 2005 through 2017*



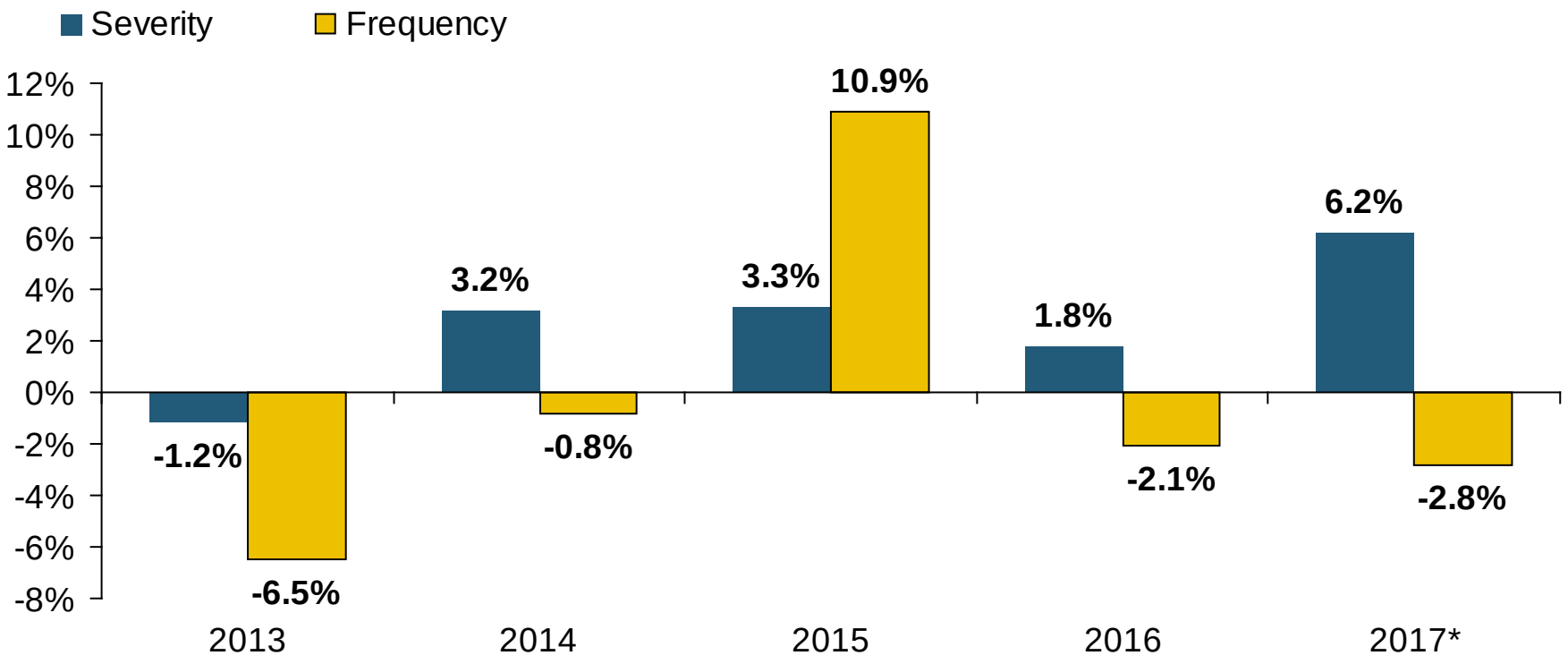
Severity/Frequency Trends Have Been Volatile, But Rising Severity since 2011 Is a Concern

*2017 figure is for the 4 quarters ending 2017:Q3.

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

PIP: Severity Trend Is Up, Frequency Decline Returning?

Annual Change, 2013 through 2017*

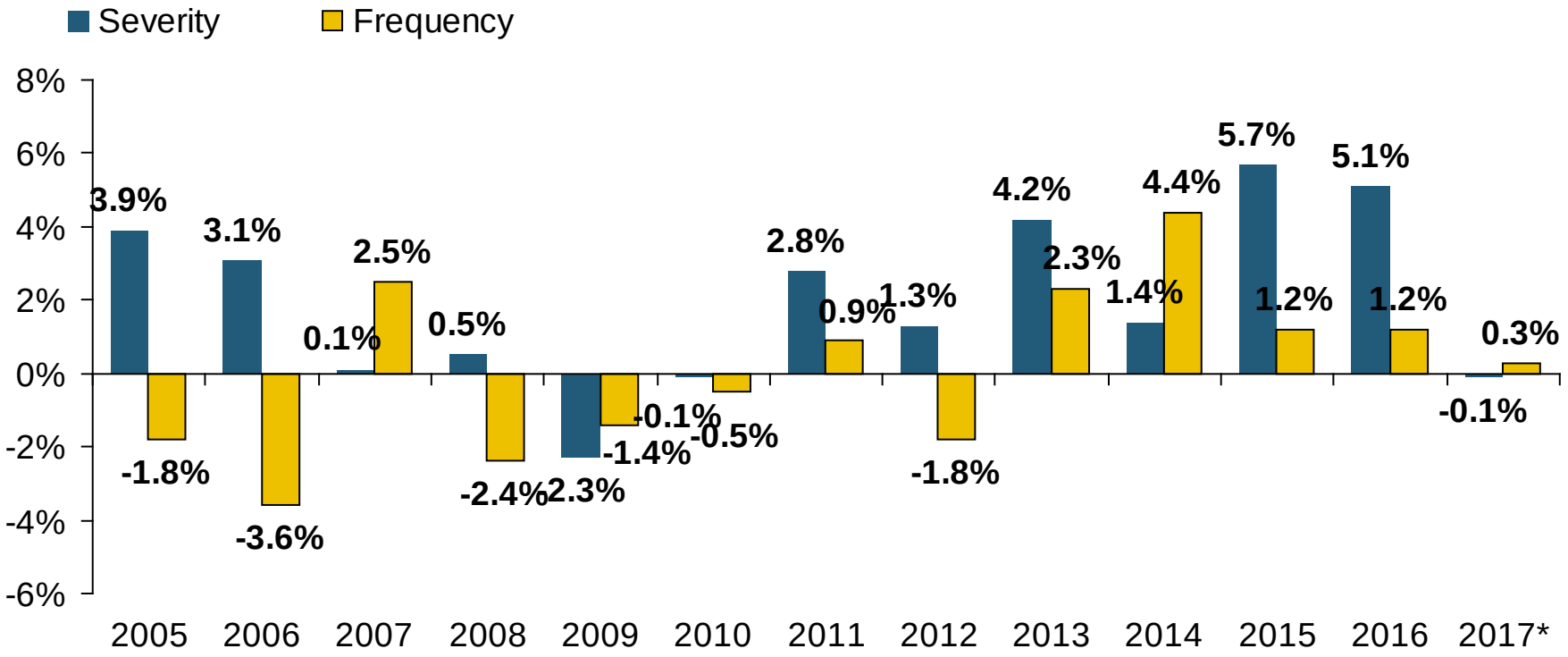


No-Fault (PIP) Trends Have Been Volatile

*2017 figure is for the 4 quarters ending 2017:Q3.
Source: ISO/PCI *Fast Track* data; Insurance Information Institute

Collision Coverage: Severity & Frequency Trends Are Both Higher in 2017*

Annual Change, 2005 through 2017*



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

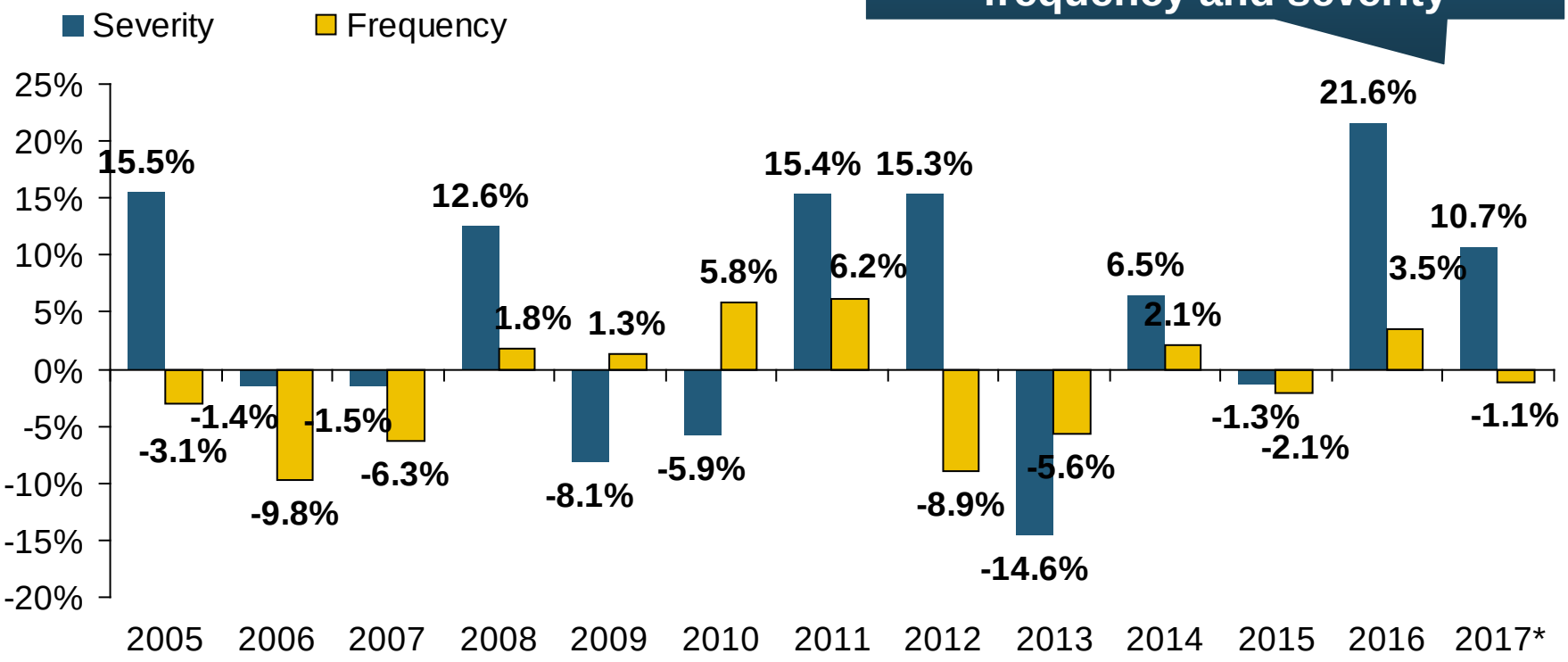
*Four quarters ending with 2017 Q3.

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

Comprehensive Coverage: Frequency and Severity Trends Are Volatile

Annual Change, 2005 through 2017*

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

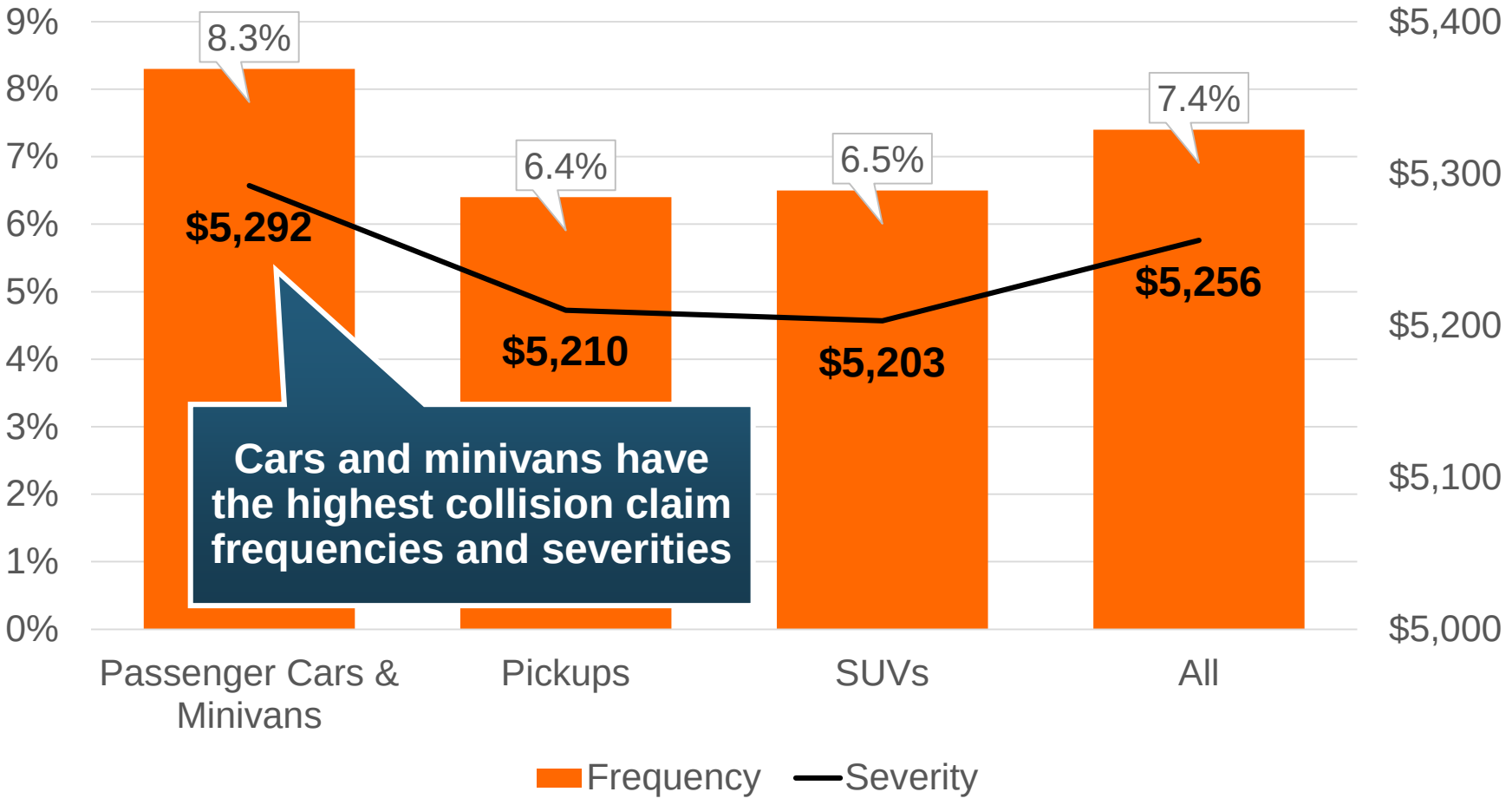


Weather Creates Volatility for Comprehensive Coverage. Comprehensive Losses Were Up 24.9% in Q3:2017 Due Largely to Hurricanes Harvey and Irma

*2017 figure is for the 4 quarters ending with 2017:Q3.

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

Passenger Vehicle Collision Coverage Insurance Losses by Vehicle Type, 2014-2016 Model Years



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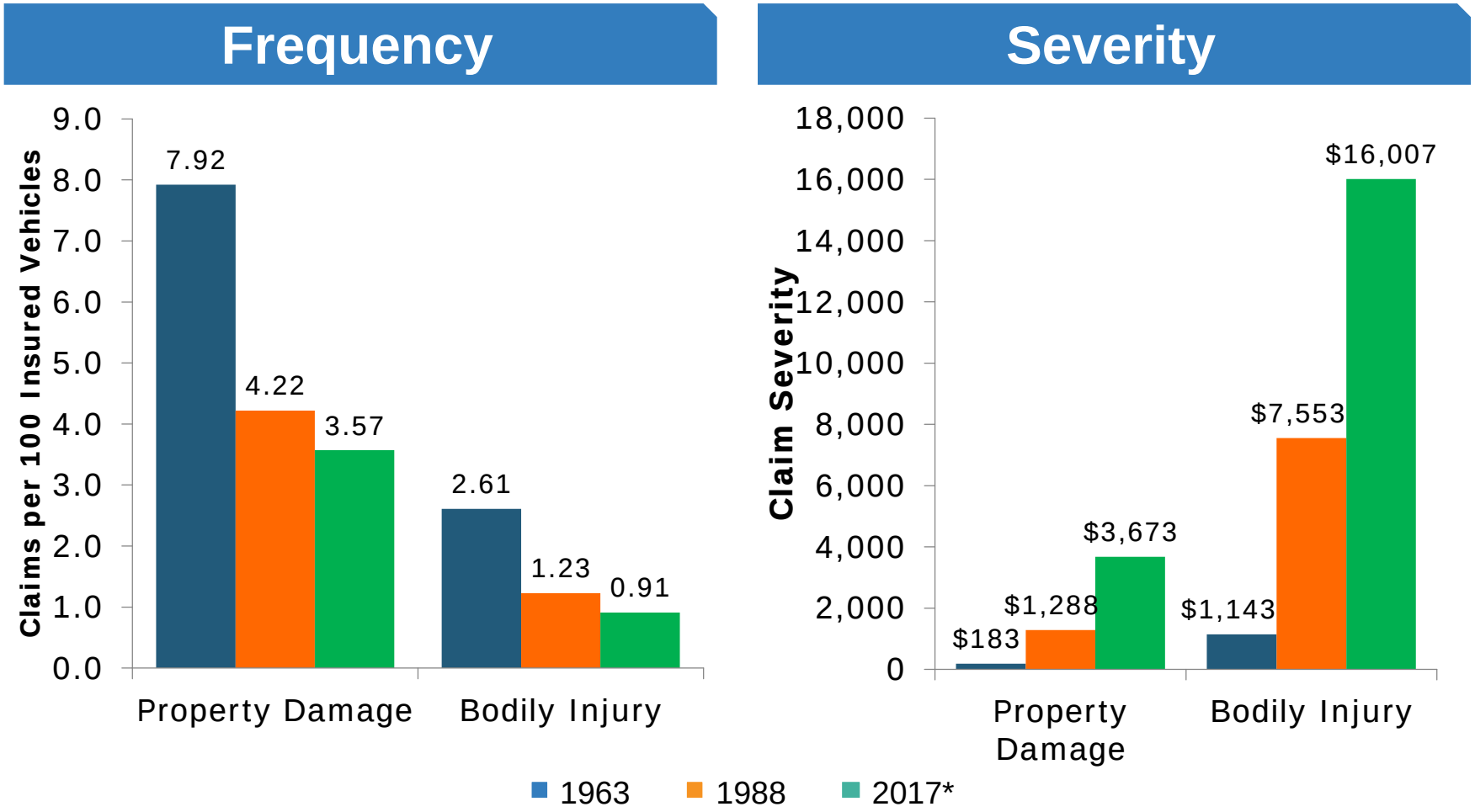
SOURCE: Highway Loss Data Institute.

A Half Century-Plus of Auto Insurance: Frequency vs. Severity

In the Long Run, Frequency Falls. Severity Increases.



*Four quarters ending in Q3:2017

Sources: Insurance Institute for Highway Safety, Insurance Services Office, Insurance Information Institute.

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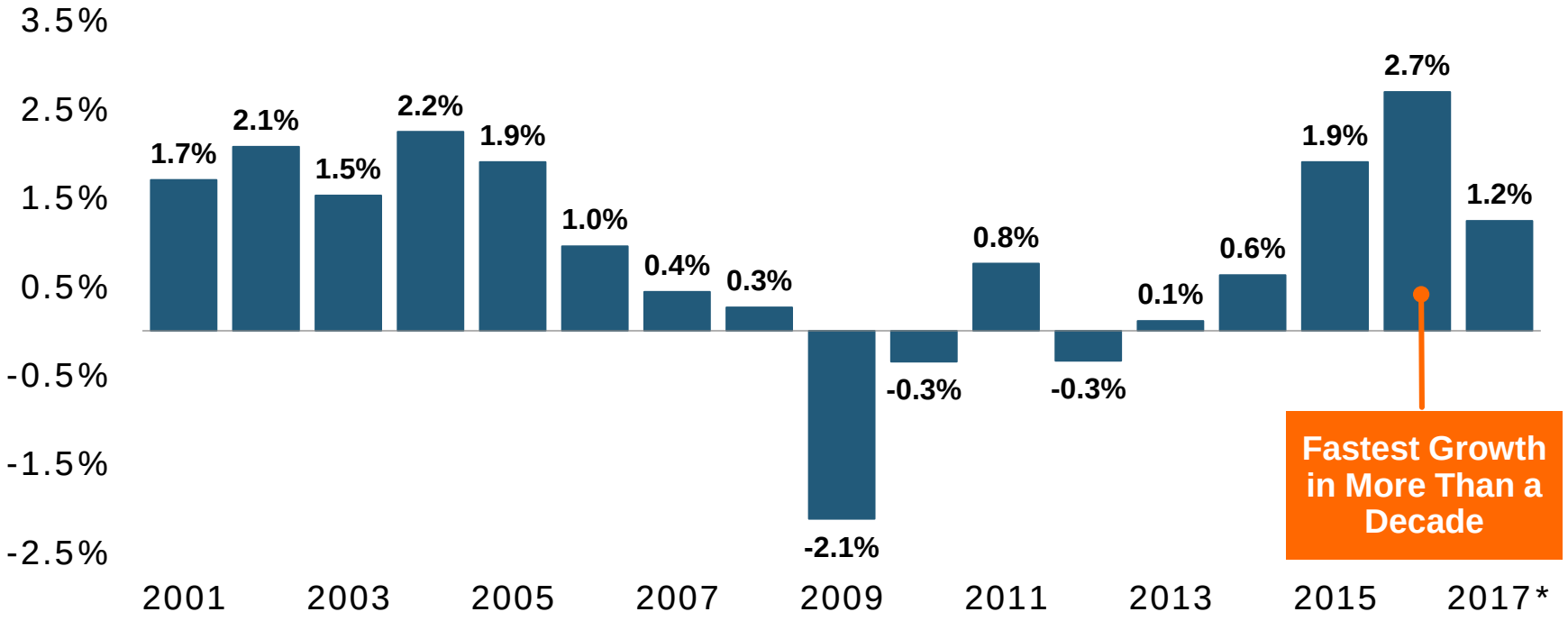
A Few Factors Driving Adverse Private Passenger Auto Loss Trends

More Jobs, Better Economy, More People Driving, More Expensive Cars, Higher Speed Limits…

America is Driving More Again: 2000-2017

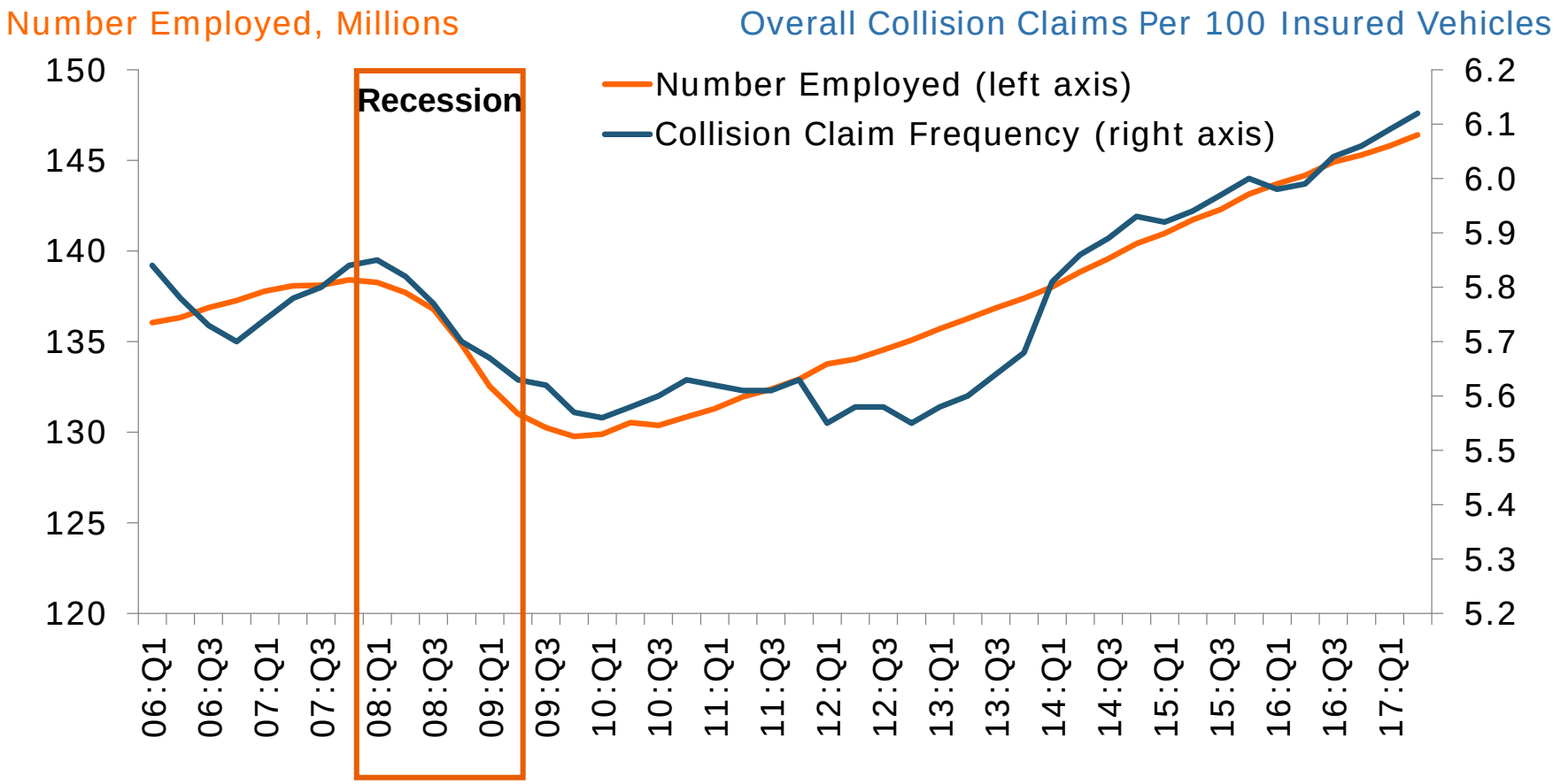
Percent Change, Miles Driven*



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

*Moving 12-month total vs. prior year through December.
Sources: Federal Highway Administration; Insurance Information Institute.

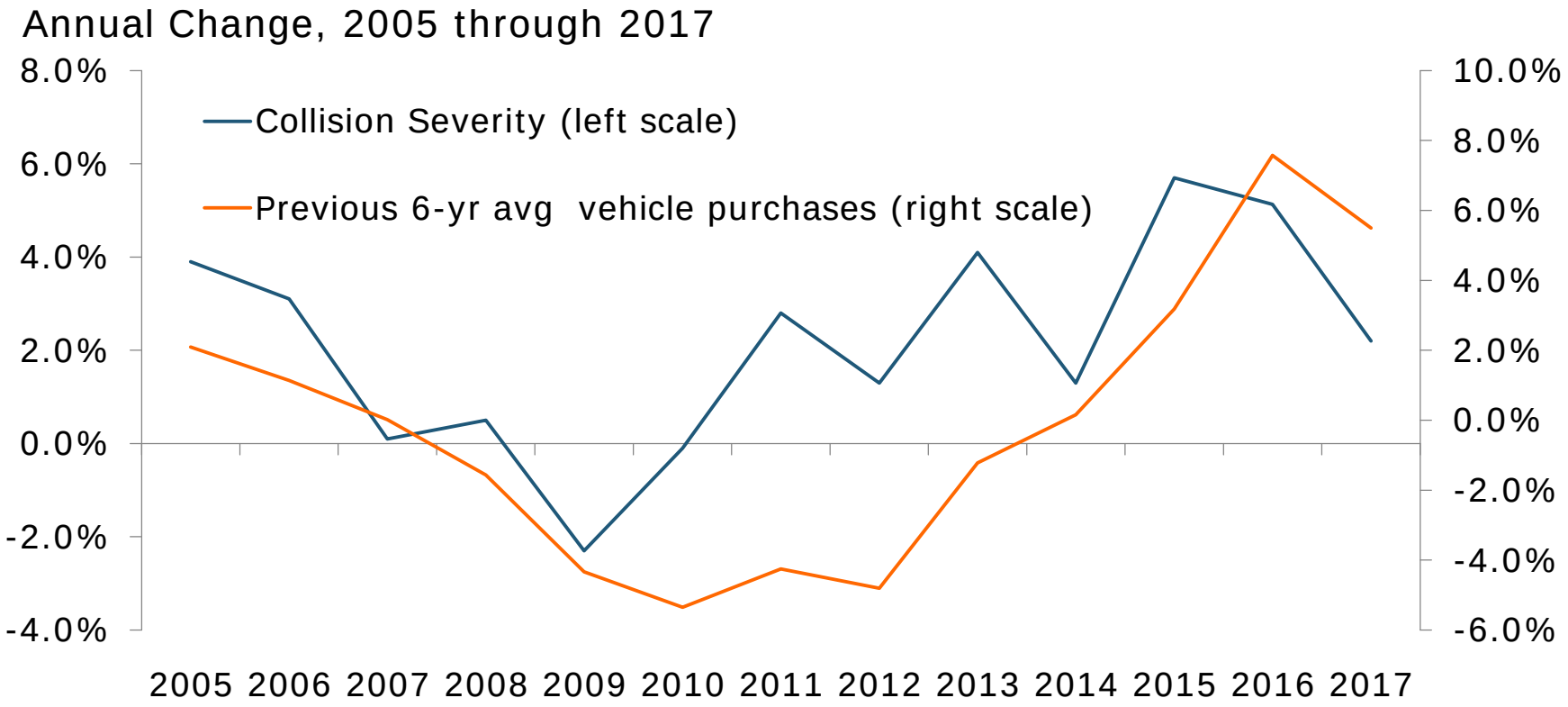
More People Working and Driving => More Collisions, 2006-2017:Q2



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 Fast Track Monitoring System; Insurance Information Institute.

Does Spending on Vehicles Affect Claim Severity?



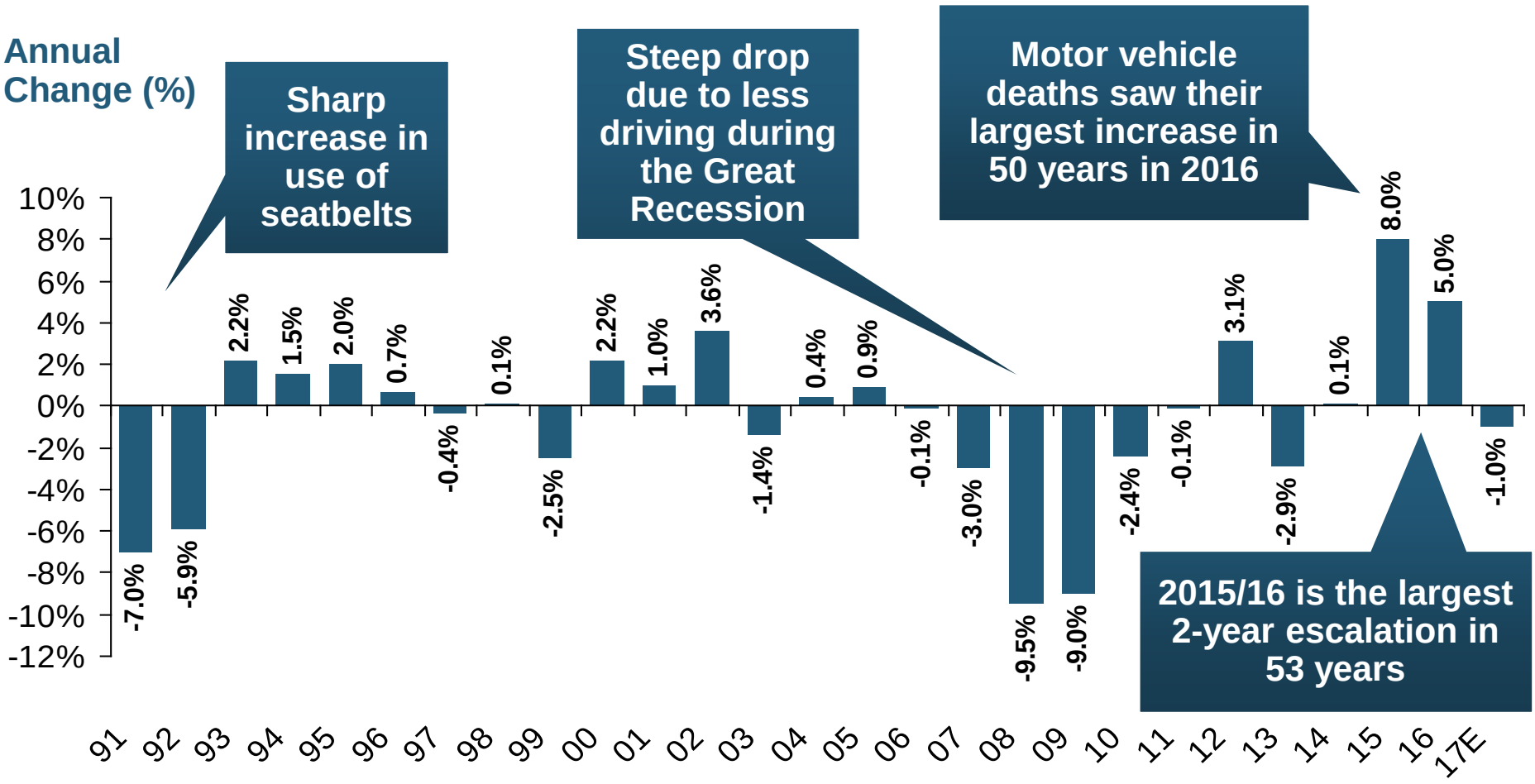
As the Economy Has Gotten Better, People Are Spending More on Vehicles – When Those Cars Are in Accidents, Severity Increases.

Source: Fast Track Monitoring System; Bureau of Labor Statistics Consumer Expenditure Survey (vehicle purchases – net outlay) Insurance Information Institute.

A Few Factors Driving Adverse Private Passenger Auto Loss Trends

More Jobs, Better Economy, More People Driving, Lower Gas Prices, More Expensive Cars, Higher Speed Limits…

U.S. Annual Change in Automobile Deaths, 1991- 2017E*



Driving Has Been Getting Safer For Decades, But Recent Trend Is Discouraging—40,200 Deaths in 2016—Little Improvement in 2017

*2017 estimate from NSC data.

Source: National Safety Council.

The First Human to Be Killed by an Autonomous Vehicle…And It Appears the Human Was at Fault…Maybe

On the night of March 18, 2018 in Tempe, AZ, 49-year old Elaine Herzberg was struck and killed by a self-driving Uber vehicle while crossing the road pushing a bicycle. She is believed to be the first human to be killed by an autonomous vehicle.

Source: TheVerge.com at: https://www.theverge.com/2018/3/20/17142672/uber-deadly-self-driving-car-crash-fault-police

Claims Quandary?

Tempe Police Chief Sylvia Moir: "*I suspect preliminarily it appears that the Uber would likely not be at fault in this accident.*" But then Moir added: "*I won't rule out the potential to file charges against the [backup driver] in the Uber vehicle.*"

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Collision Repair Cost Drivers

The Bottom Line:

High Tech Vehicles Are Expensive to Repair

“Key to Key”: Vehicle Repair Times Are Increasing, 2013-2017

Driveable Flag	CY	Repair Cycle Time					Shop Productivity	
		Vehicle In to Repairs Started Days Avg	Repairs Started to Repairs Completed Days Avg	Repairs Completed to Vehicle Out Days Avg	Vehicle In to Vehicle Out Days Avg		Labor Hrs per Repair Day	Labor Hrs per Shop Day
Driveable	CY2013	0.6	5.3	0.8	6.7		4.2	3.4
	CY2014	0.7	5.7	0.8	7.2		3.9	3.0
	CY2015	0.6	5.8	0.9	7.3		3.8	3.0
	CY2016	0.6	6.3	0.9	7.8		3.6	2.9
	CY2017	0.6	6.3	0.9	7.8		3.6	2.9
Non-Driveable	CY2013	2.5	11.3	1.4	15.2		3.6	2.8
	CY2014	3.2	12.7	1.2	17.0		3.1	2.3
	CY2015	2.9	13.3	1.3	17.4		3.0	2.3
	CY2016	2.7	13.9	1.4	18.1		2.9	2.2
	CY2017	2.5	13.6	1.3	17.4		2.9	2.2
TOTAL	CY2013	1.0	6.6	0.9	8.5		4.0	3.2
	CY2014	1.2	7.1	0.8	9.1		3.6	2.8
	CY2015	1.0	7.2	0.9	9.2		3.5	2.8
	CY2016	1.0	7.7	1.0	9.7		3.4	2.6
	CY2017	0.9	7.6	1.0	9.5		3.4	2.7

Driveable
+0.6 days
(+18.9%)

Non-Driveable
+2.3 days
(+20.3%)

Total
+1.0 days
(+15.2%)

Source: CCC accessed via PropertyCasualty360.com at:
https://www.propertycasualty360.com/native/?mvi=204cd819dffd479f9551e33dc691c4a8&mvpf=e9c65c7f741c449bbb8c0ebe08e5a1c9&mvpflabel=&et=editorial&bu=PC360&cn=20180305&src=EMC-Email&pt=Daily&slreturn=20180205153245

Direct Repair Program Vehicle Volume by Repair Cost Range and Drivability, 2013-2017

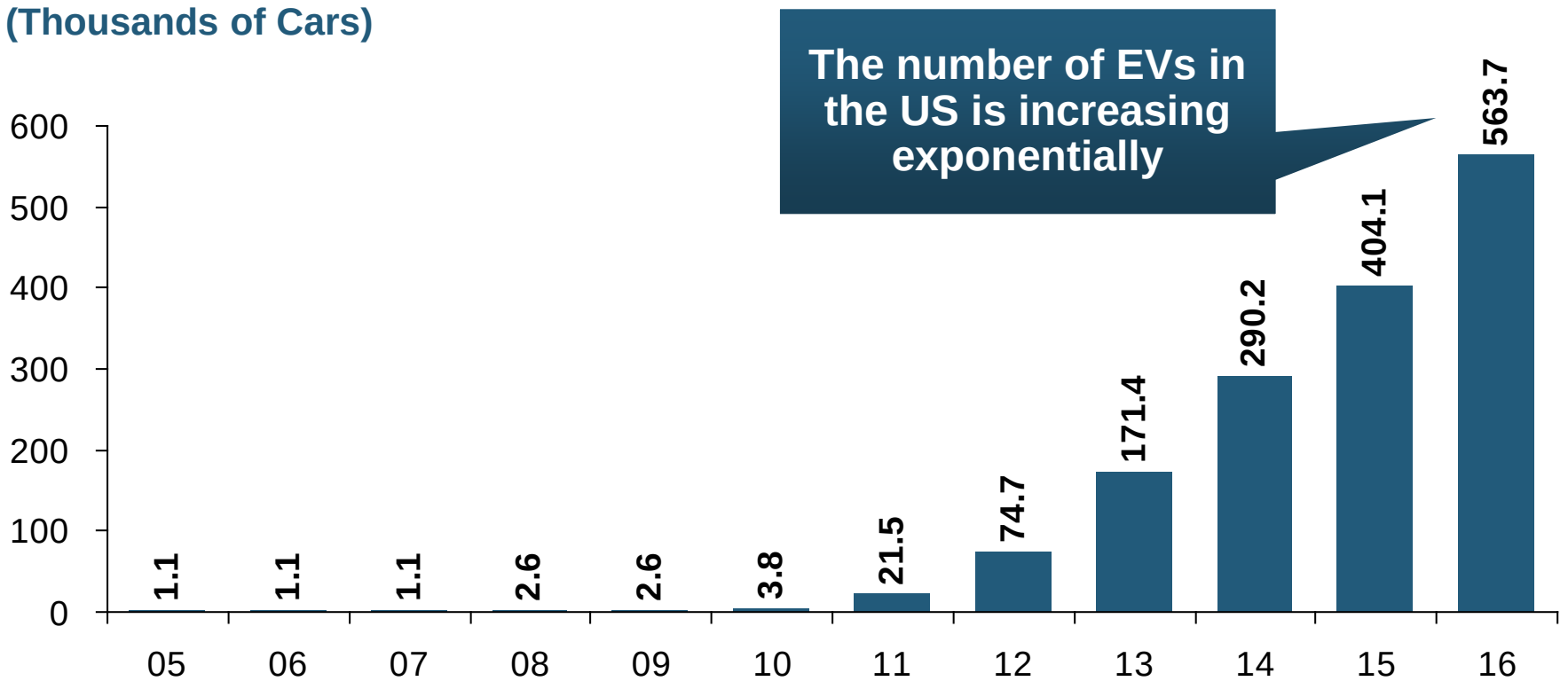
Repair Cost Ranges	CY2013	CY2014	CY2015	CY2016	CY2017
$0.01 to $500.00	3.5%	3.2%	3.0%	2.6%	2.4%
$500.01 to $1,000.00	16.5%	15.8%	15.4%	14.3%	13.5%
$1,000.01 to $2,000.00	29.8%	29.5%	29.5%	28.9%	28.7%
$2,000.01 to $3,000.00	18.6%	18.9%	19.2%	19.5%	19.8%
$3,000.01 to $4,000.00	11.2%	11.5%	11.7%	12.1%	12.4%
$4,000.01 to $5,000.00	7.1%	7.3%	7.3%	7.7%	7.9%
$5,000.01 to $6,000.00	4.5%	4.7%	4.7%	5.0%	5.1%
$6,000.01 to $10,000.00	6.8%	7.1%	7.1%	7.7%	7.8%
$10,000.01 to $15,000.00	1.6%	1.7%	1.7%	1.9%	1.8%
$15,000.01 to $20,000.00	0.30%	0.31%	0.34%	0.38%	0.37%
$20,000.01 & Up	0.10%	0.10%	0.11%	0.14%	0.13%
	CY2013	CY2014	CY2015	CY2016	CY2017
Non-Driveable %	22.1%	19.5%	18.2%	18.1%	17.3%

Repair costs have been drifting upward

Non-drivable share has been declining

Source: CCC accessed via PropertyCasualty360.com at:
https://www.propertycasualty360.com/native/?mvi=204cd819dffd479f9551e33dc691c4a8&mvpf=e9c65c7f741c449bbb8c0ebe08e5a1c9&mvpflabel=&et=editorial&bu=PC360&cn=20180305&src=EMC-Email&pt=Daily&slreturn=20180205153245

Electric Car Stock in the US: 2005–2016*



EV Sales Remain Strong but Total Just 1% of the US Stock of Cars

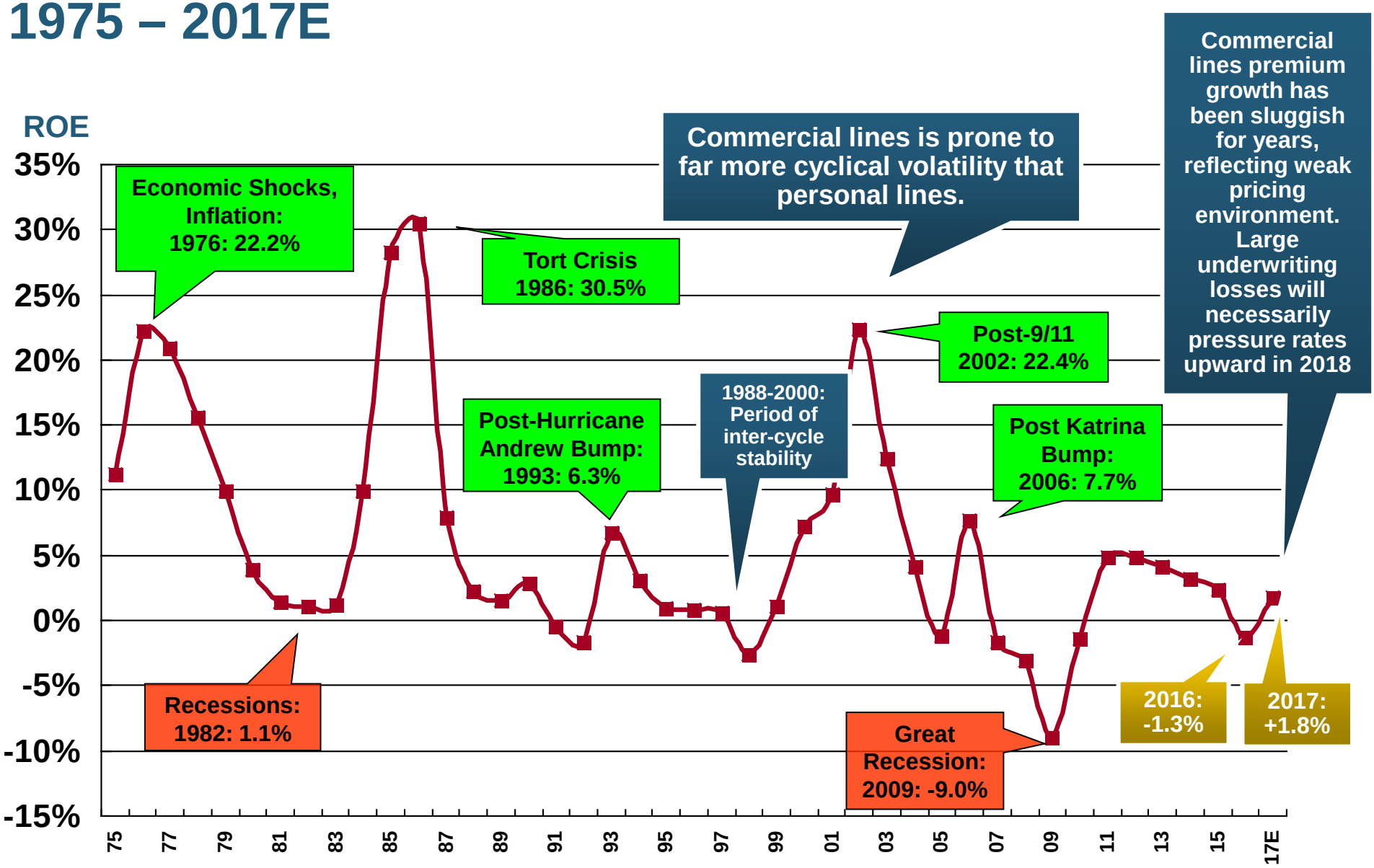
*Includes plug-inn vehicles and hybrids.
Source: International Energy Agency, 2017 Global Electric Vehicle Outlook accessed at: https://www.iea.org/publications/freepublications/publication/GlobalEVOutlook2017.pdf; USC RUM.

Commercial Lines Growth, Underwriting Performance & Pricing Cyclicality

Cyclicality in Growth, Price Are the Norm

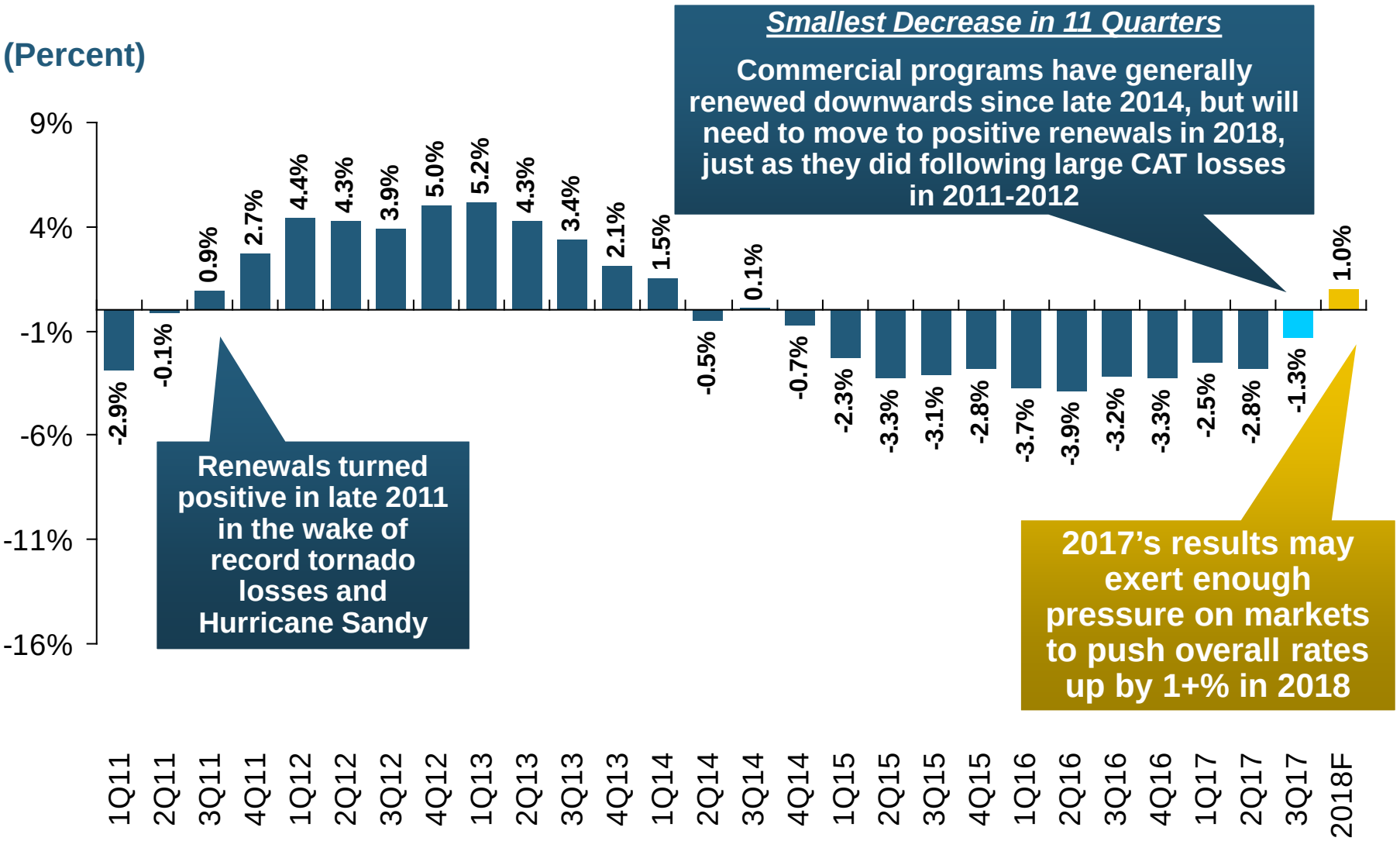
Rising Rates Are a Normal Part of Adjustment Process

Commercial Lines NPW Premium Growth: 1975 – 2017E



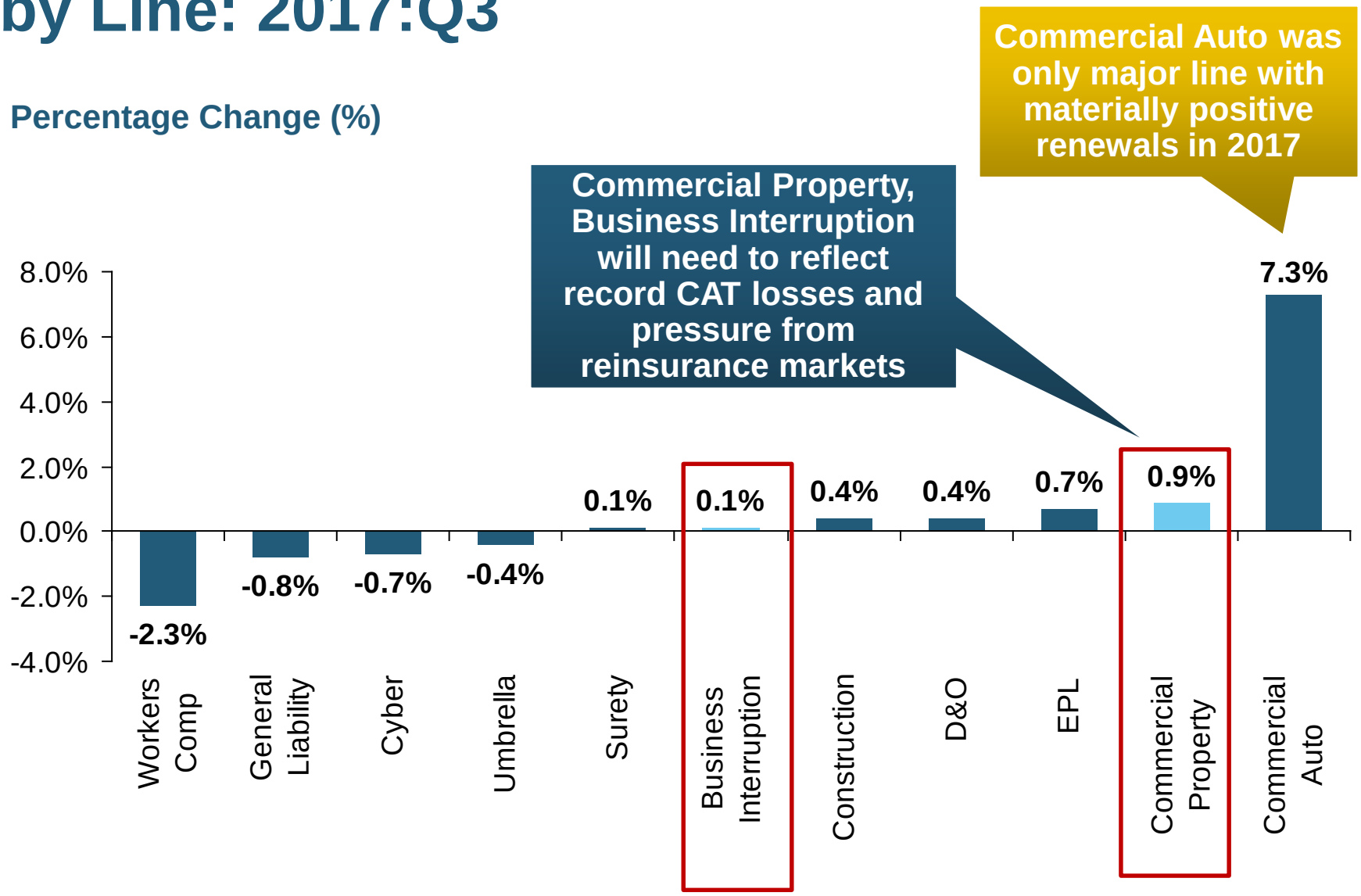
Note: Data include state funds beginning in 1998.
Source: A.M. Best; Insurance Information Institute. 2017 estimate: Univ. of South Carolina Center for Risk and Uncertainty Management, ISO.

CIAB: Average Commercial Rate Change, All Lines, 2011:Q1–2017:Q3*, 2018F



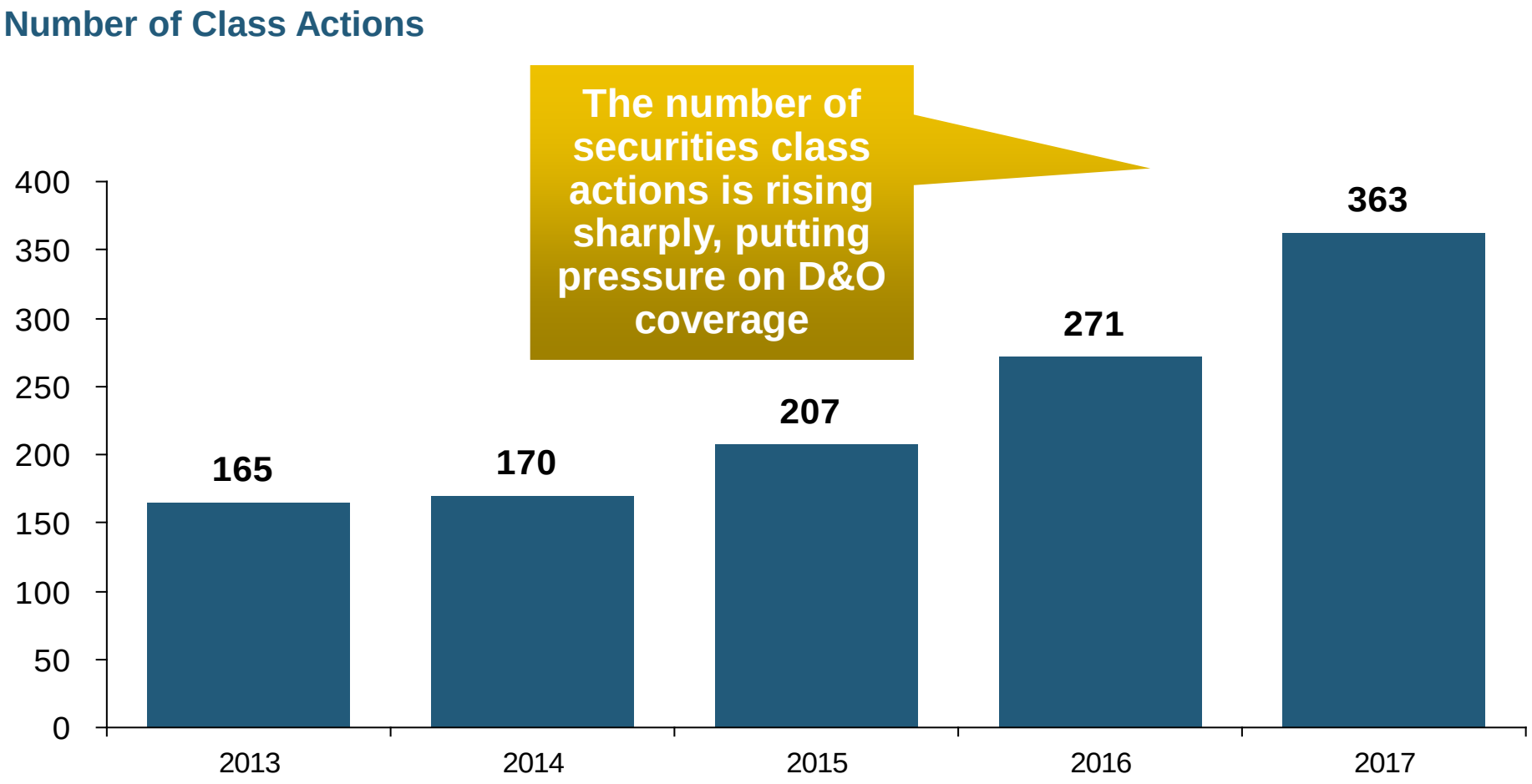
*Latest available.
Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
Source: Council of Insurance Agents & Brokers; Center for Risk and Uncertainty Management, Univ. of South Carolina.

Change in Commercial Rate Renewals, by Line: 2017:Q3



Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
Source: Council of Insurance Agents and Brokers; USC Center for Risk and Uncertainty Management.

D&O Pressure: Number of Federal Securities Class Actions, 2013 – 2017*



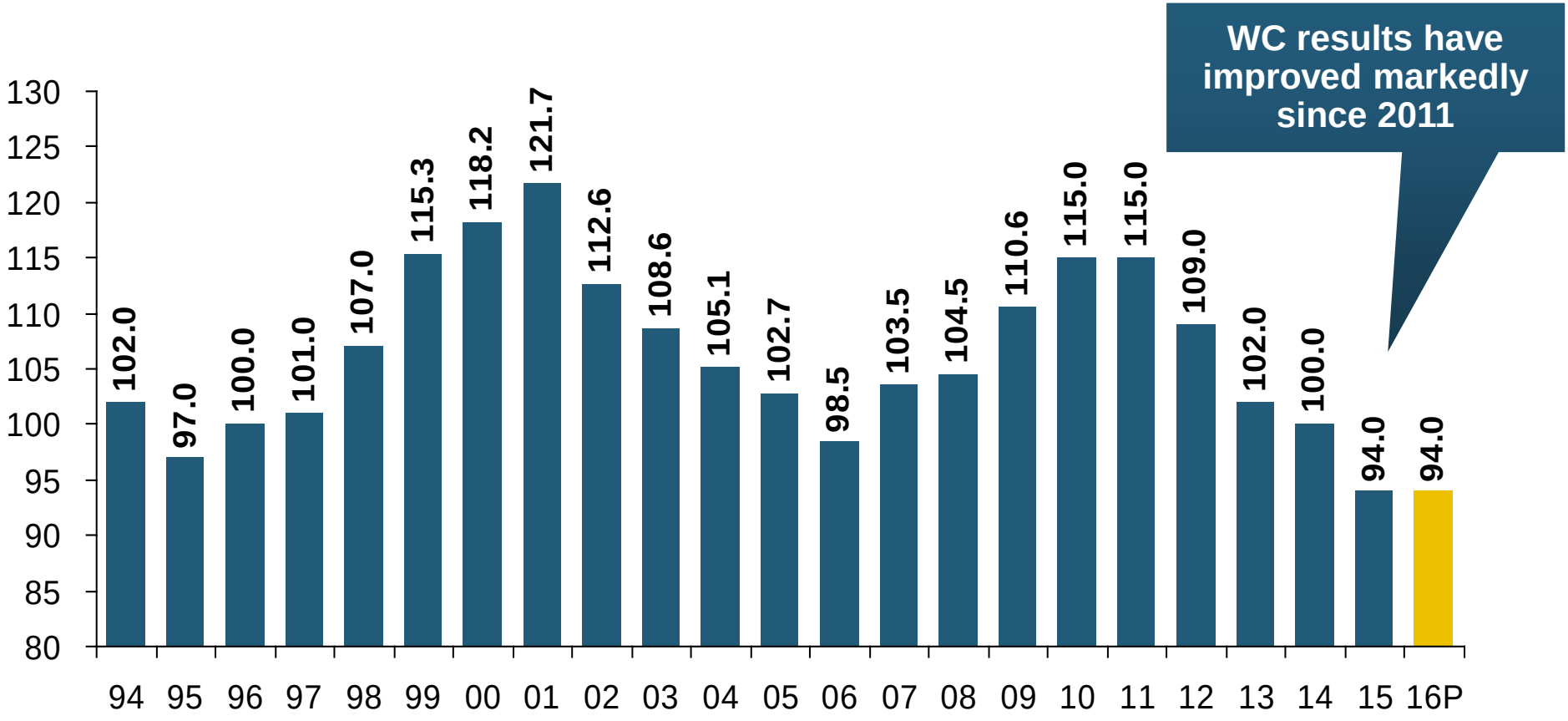
*As of Nov. 16, 2017.
Source: Stanford University Law School: http://securities.stanford.edu/

Workers Comp Spotlight

Underwriting Results Remain Strong

Exposure Outlook Is Outstanding as Job Growth Continues and Wage Gains Accelerate

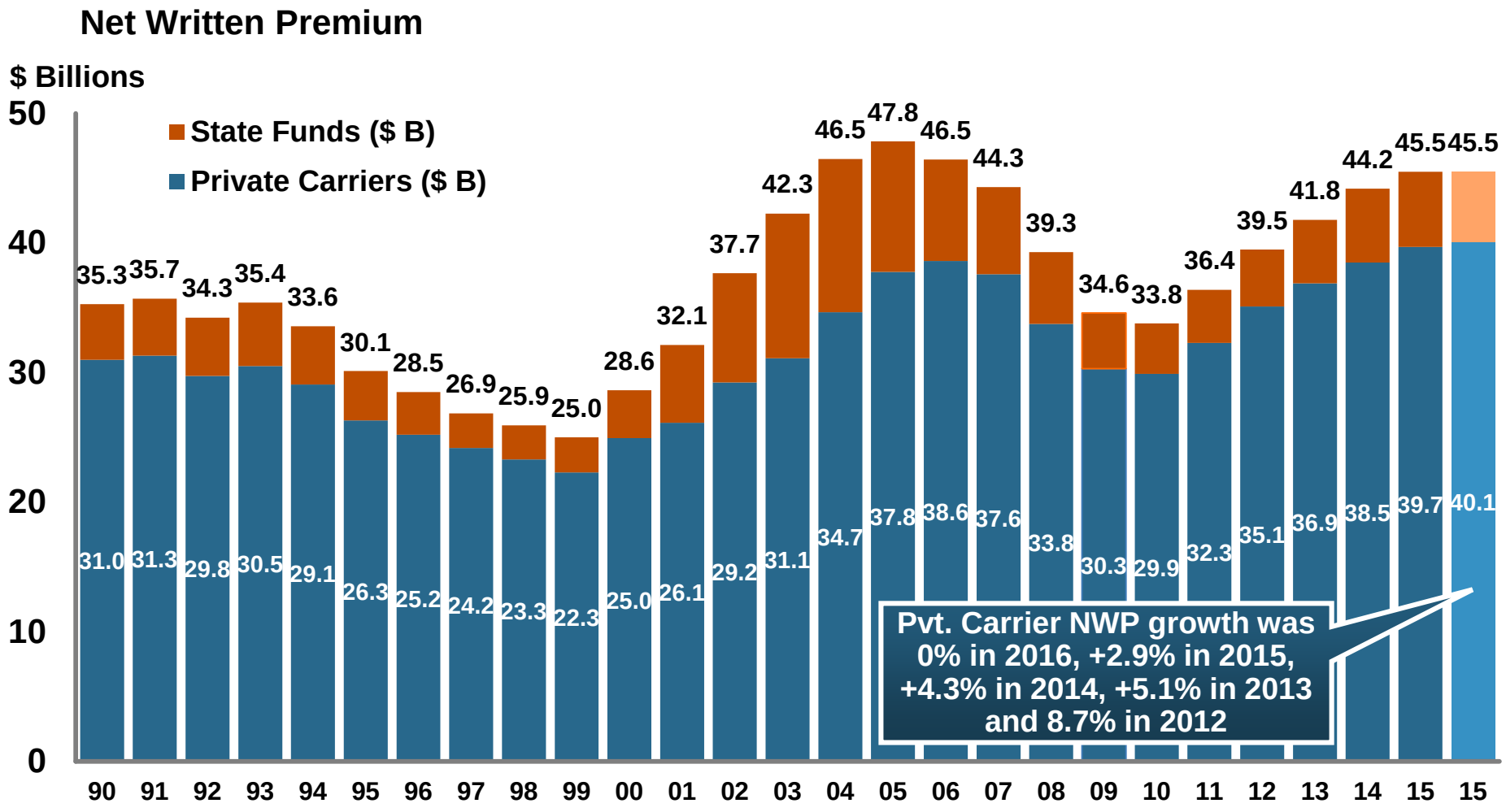
Workers Compensation Combined Ratio: 1994–2016P



Workers Comp Is an Example of a Line that Was Recently Restored to Health Through the Return of Rate Adequacy

Sources: A.M. Best (1994-2009); NCCI (2010-2016P) and are for private carriers only..

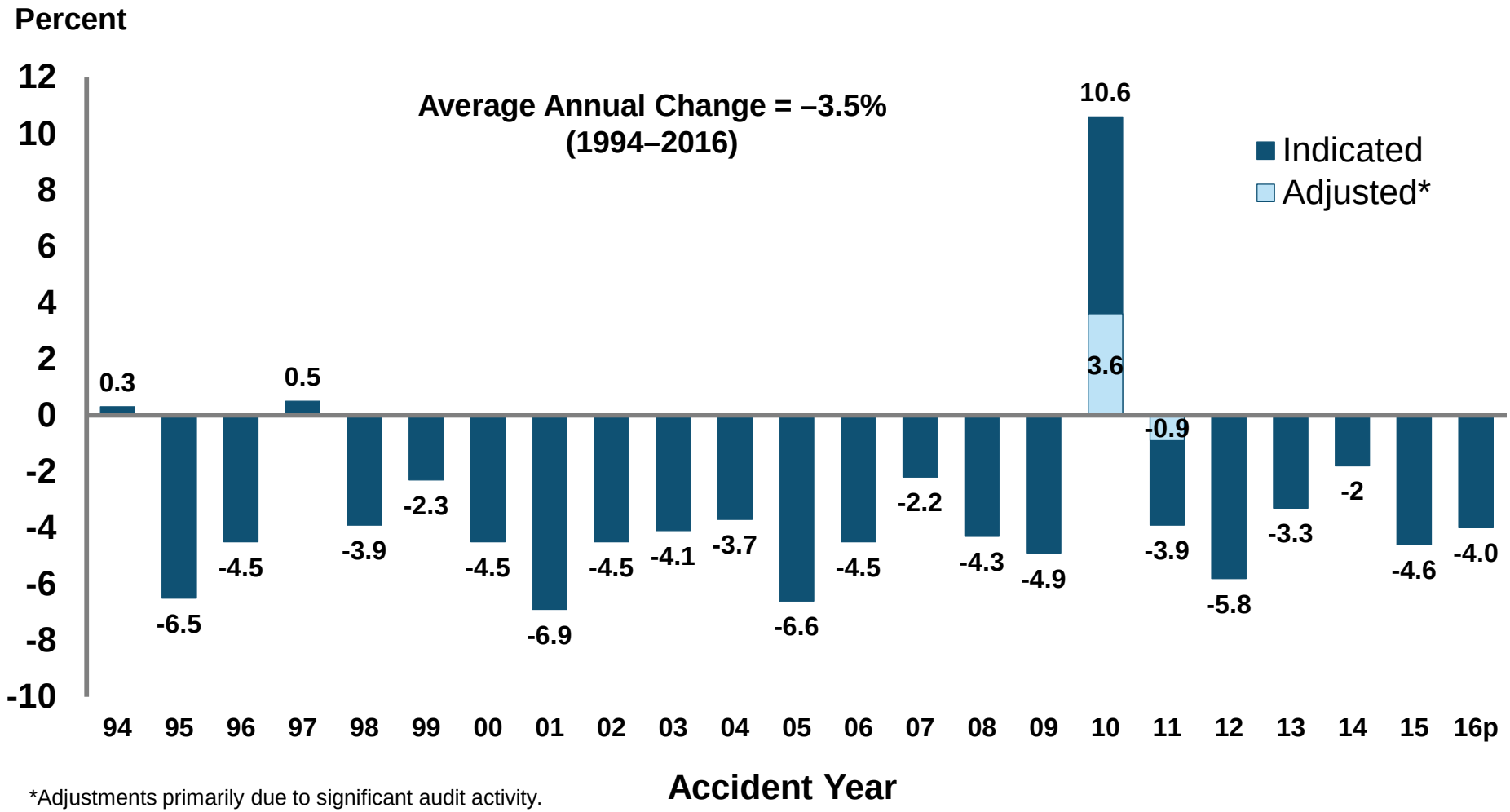
Workers Compensation Premium: Flat in 2016 After 5 Years of Increase



p Preliminary

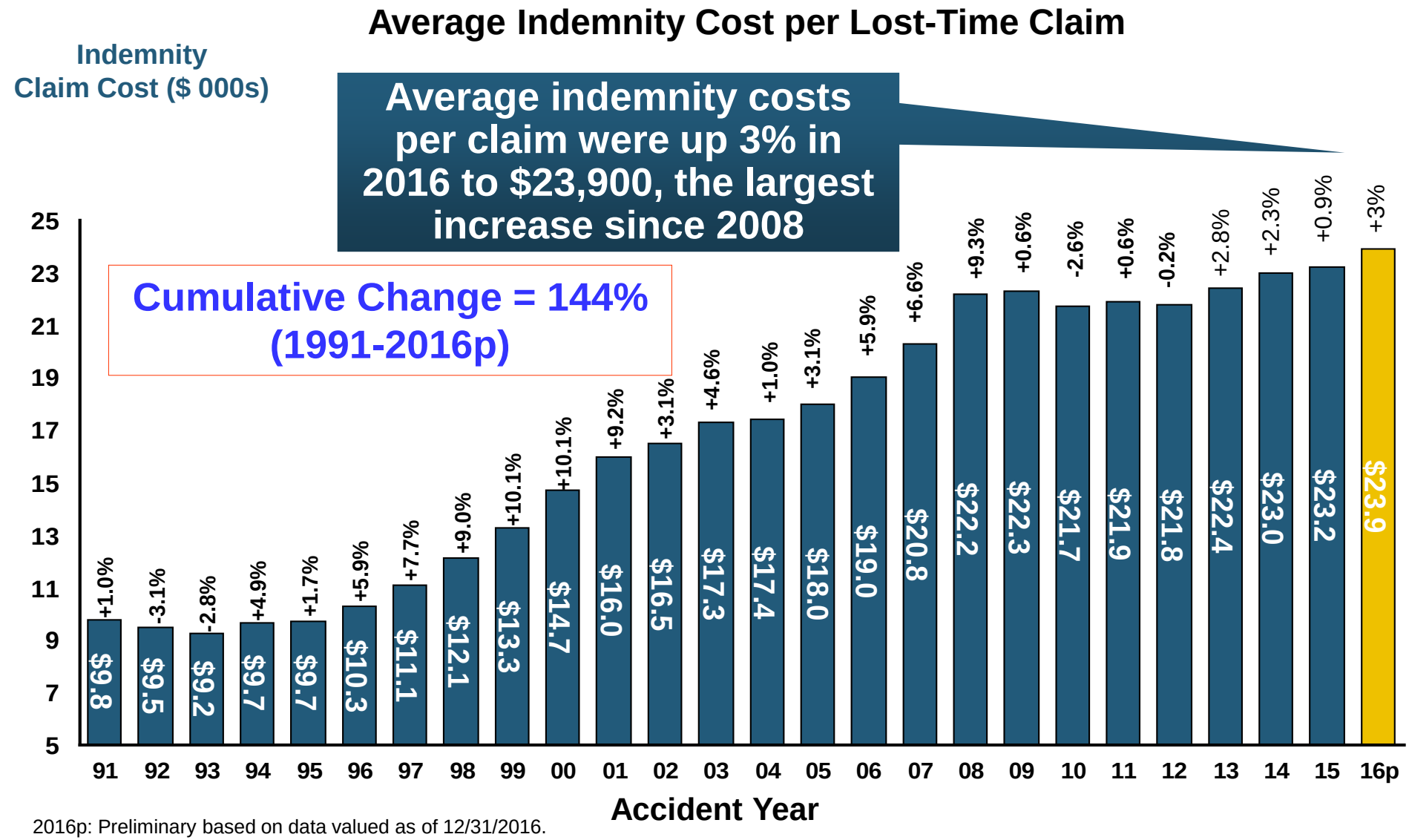
Source: NCCI from Annual Statement Data.
Includes state insurance fund data for the following states: AZ, CA, CO, HI, ID, KY, LA, MD, MO, MT, NM, OK, OR, RI, TX, UT.
Each calendar year total for State Funds includes all funds operating as a state fund that year.

Workers Compensation Lost-Time Claim Frequency Declined in 2016



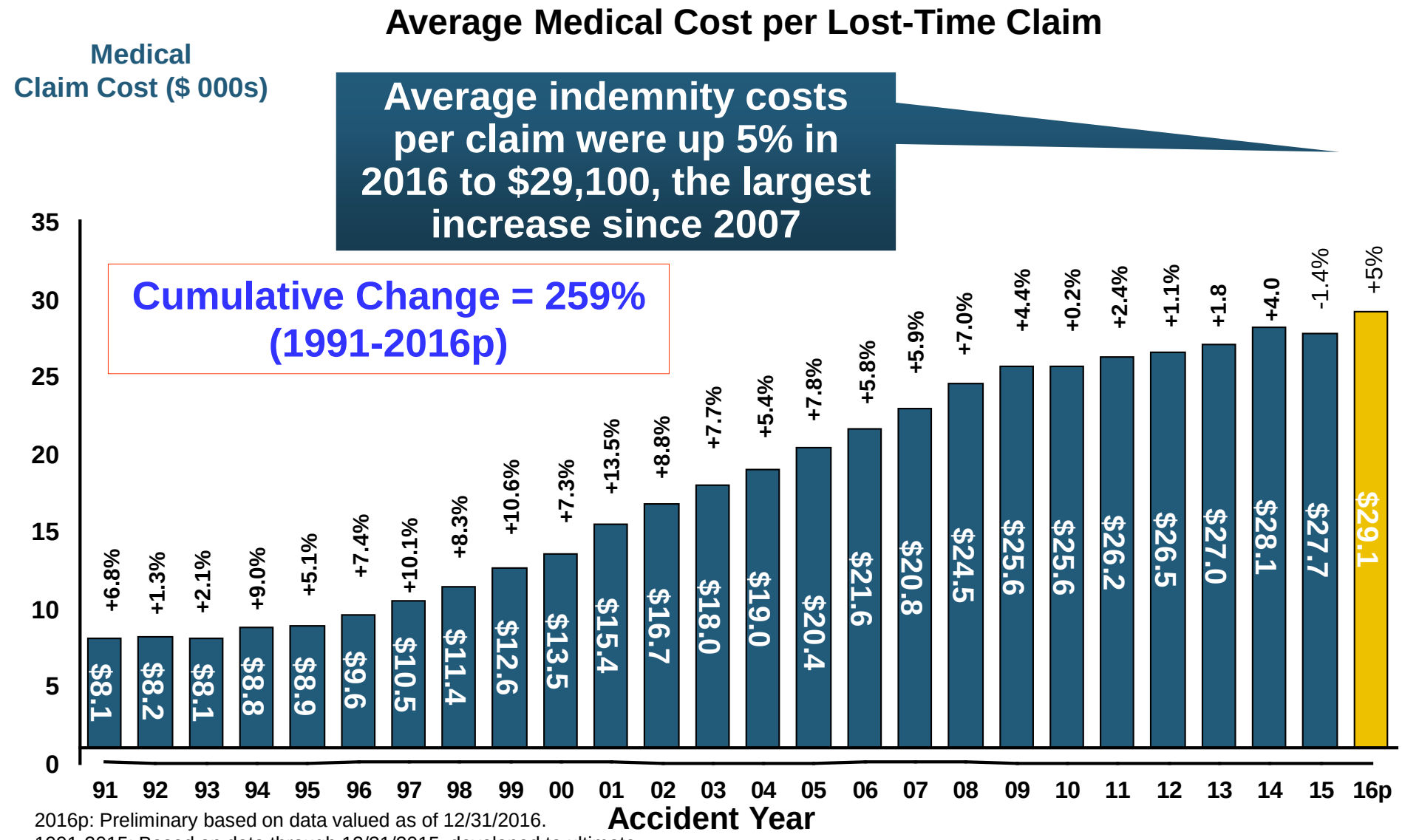
*Adjustments primarily due to significant audit activity.
2016p: Preliminary based on data valued as of 12/31/2016.
Source: NCCI Financial Call data, developed to ultimate and adjusted to current wage an voluntary loss cost level; Excludes high deductible policies; 1994-2014: Based on data through 12/31/14. Data for all states where NCCI provides ratemaking services, excluding WV.
Frequency is the number of lost-time claims per $1M pure premium at current wage and voluntary loss cost level

Workers Comp Indemnity Claim Costs: Sharper Increase in 2016



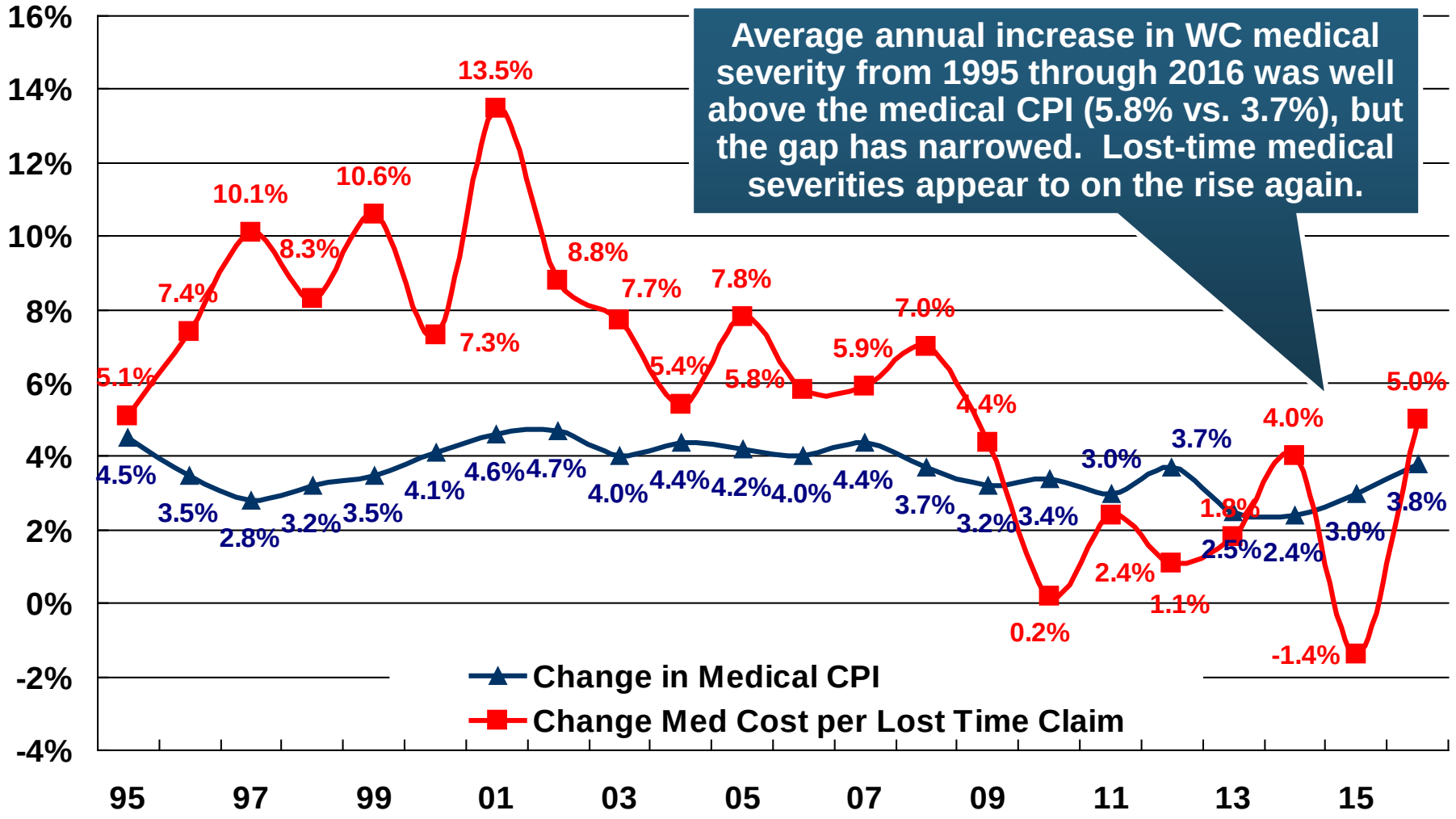
2016p: Preliminary based on data valued as of 12/31/2016.
1991-2015: Based on data through 12/31/2015, developed to ultimate
Based on the states where NCCI provides ratemaking services including state funds, excluding WV; Excludes high deductible policies.

Workers Comp Medical Claim Costs: 2016 Was Sharpest Increase Since 2007



2016p: Preliminary based on data valued as of 12/31/2016.
1991-2015: Based on data through 12/31/2015, developed to ultimate
Based on the states where NCCI provides ratemaking services including state funds, excluding WV; Excludes high deductible policies.

WC Medical Severity Generally Outpaces the Medical CPI Rate, 1995 – 2016p



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

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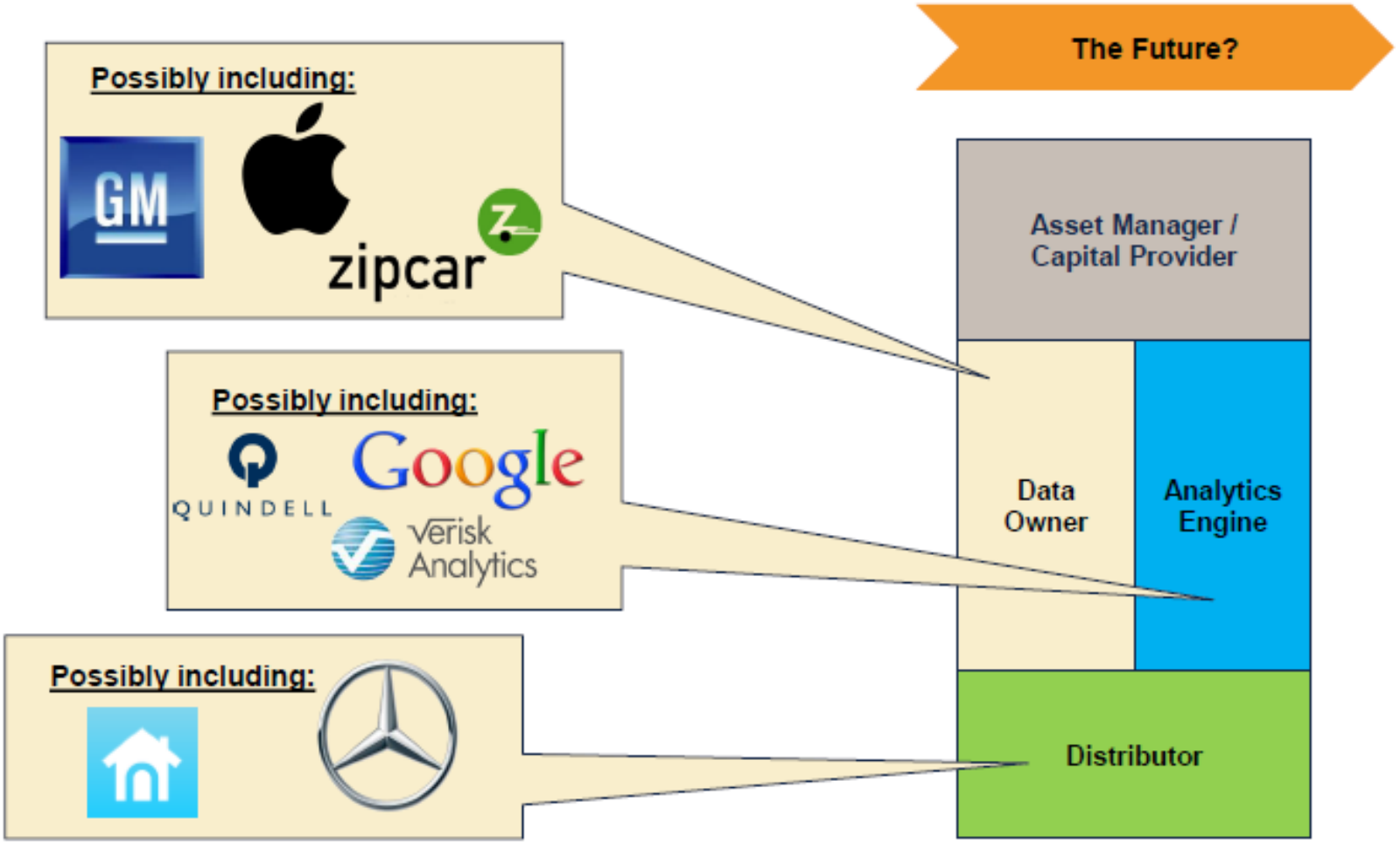
INDUSTRY DISRUPTORS

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

Reality vs. Drinking the Silicon Valley Kool Aid

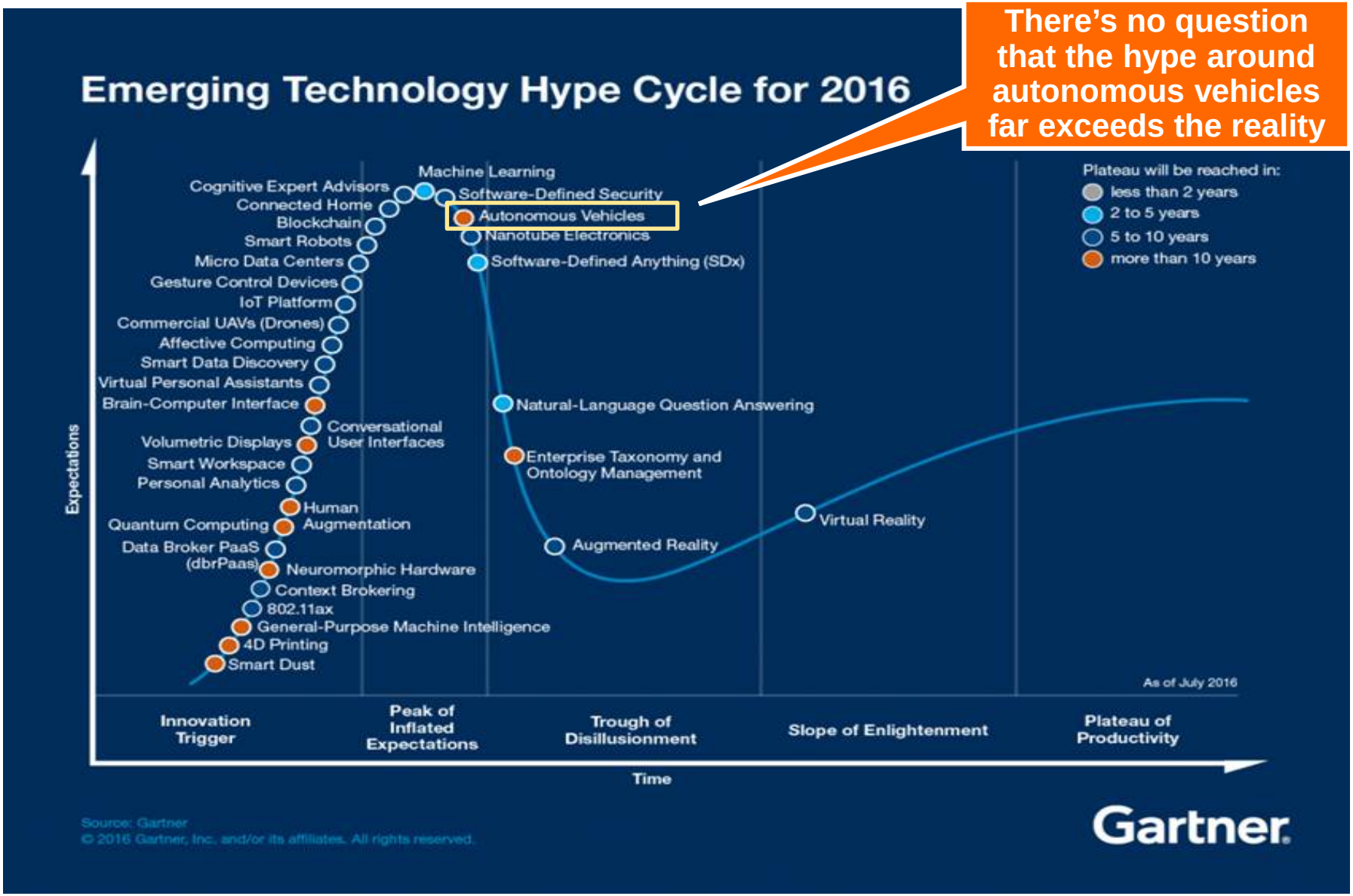
The Internet of Things and the Insurance Industry Value Chain



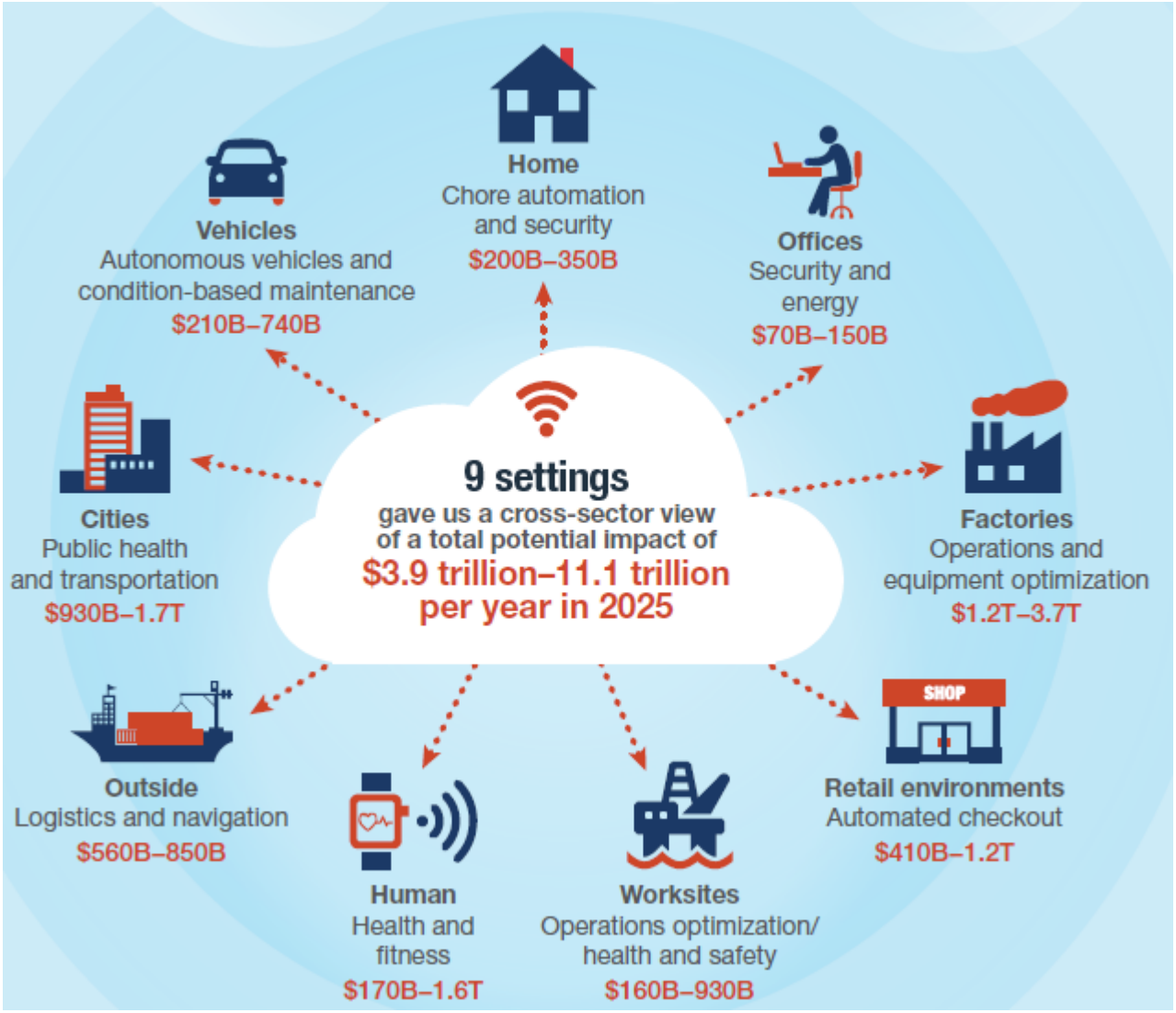
Who owns the data? Where does It flow? Who does the analytics? Who is the capital provider?

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

The Sharing Economy Has Grown—And Attracted Political Scrutiny



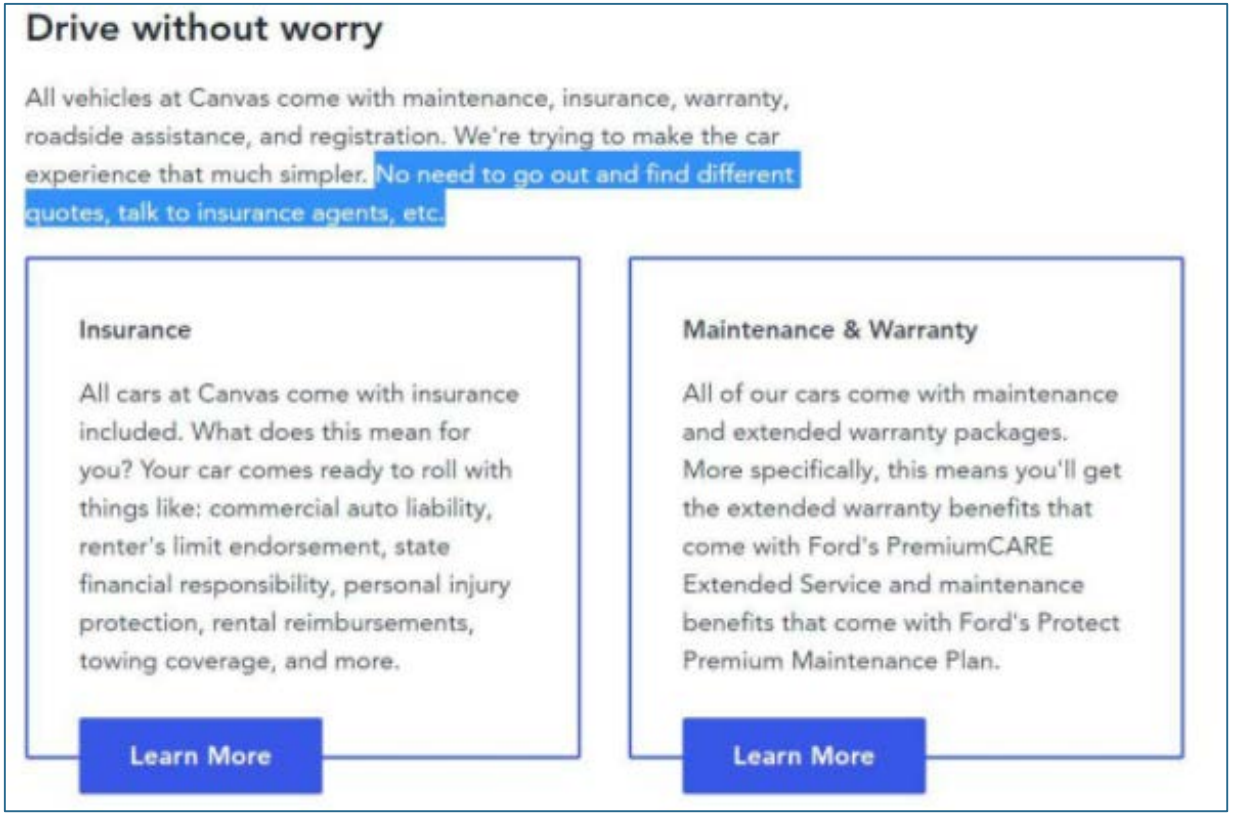
The Internet of Things and the Insurance Industry



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"?**

Car Subscription Services: A Threat to Personal Auto?



- **Liberty Mutual, Assurant, Chubb have struck multiple deals**
- **Volvo, Ford, Cadillac, Porsche, BMW and Mercedes-Benz have either launched or announced plans to launch car subscription models**

Source: CB Insights accessed 3/14/18 at: https://www.cbinsights.com/research/insurance-car-subscription-partnerships/

Car Subscription Services: A Threat to Personal Auto?

- **Ford's Canvas programs states that it provides: BI & PD Liability $300K combined single limit), PIP, Med Pay, UI/UIM, Collision & Comprehensive ($500 deductible), Roadside Assistance, Rental Reimbursement**
- **No flexibility in coverage but can use own auto insurance as primary and Canvas as excess**

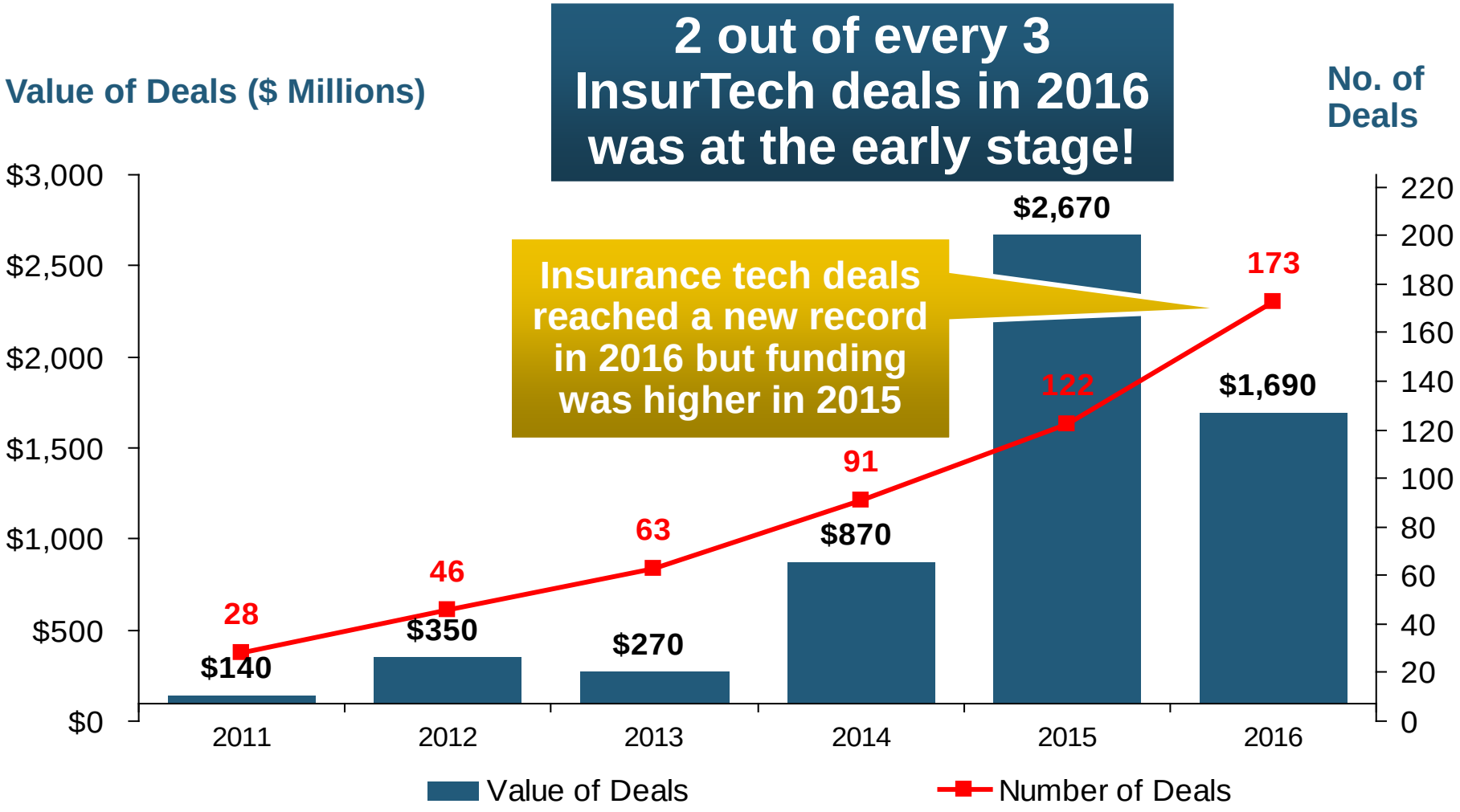
Source: www.drivecanvas.com accessed 3/14/18.

INSURANCE TECHNOLOGY: *FIN TECH ZEROES IN*

Number and Value of Deals Is Increasing

An Industry that Has Always Been Accepting of Change and Innovation

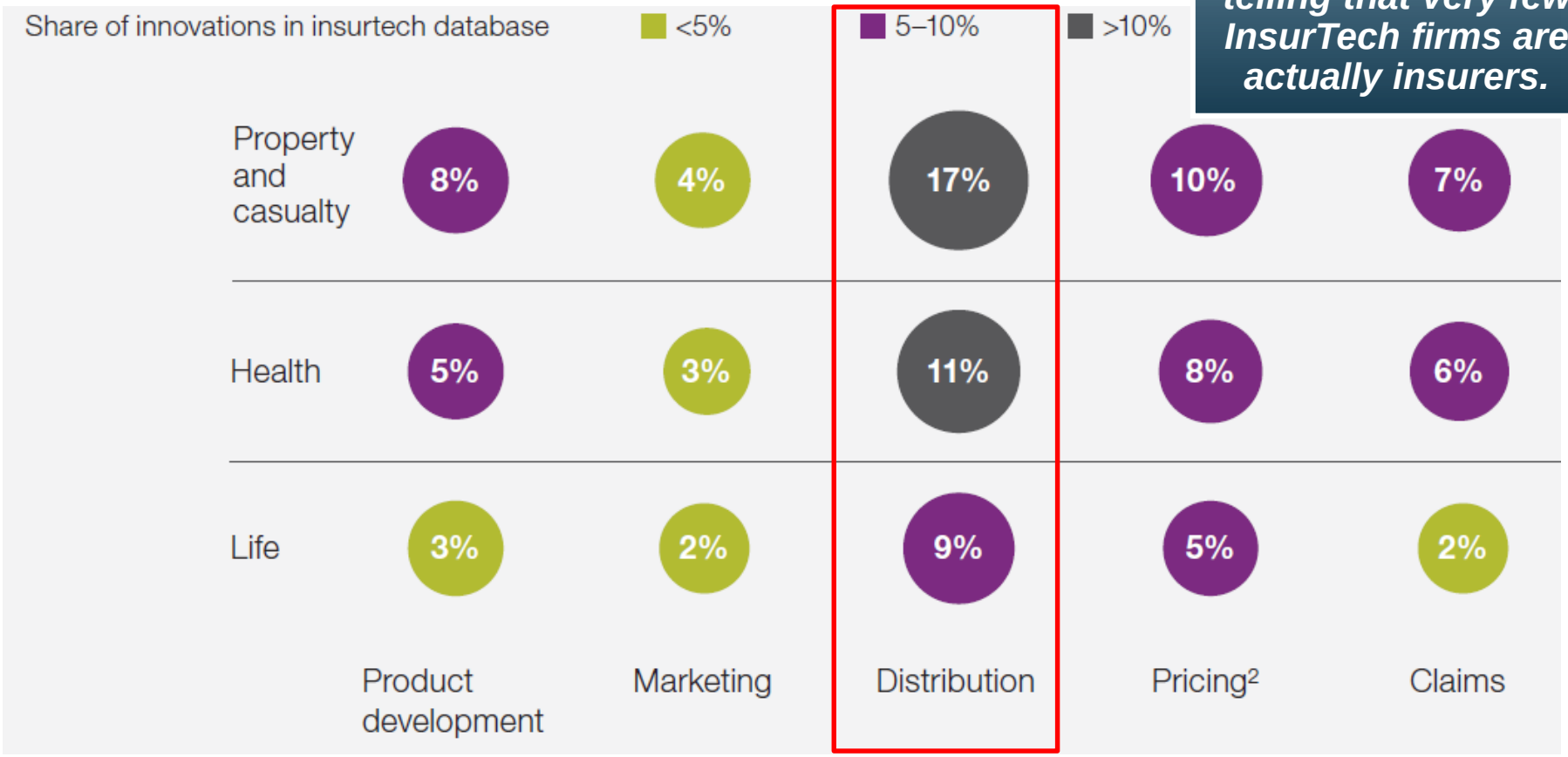
InsurTech Annual Financing, 2011 – 2016



Source: CB Insights at https://www.cbinsights.com/blog/2016-insurance-tech-funding/

InsurTechs Are Focusing on Distribution and Pricing

InsurTech firms across all insurance segments tend to focus on Distribution. *It is telling that very few InsurTech firms are actually insurers.*

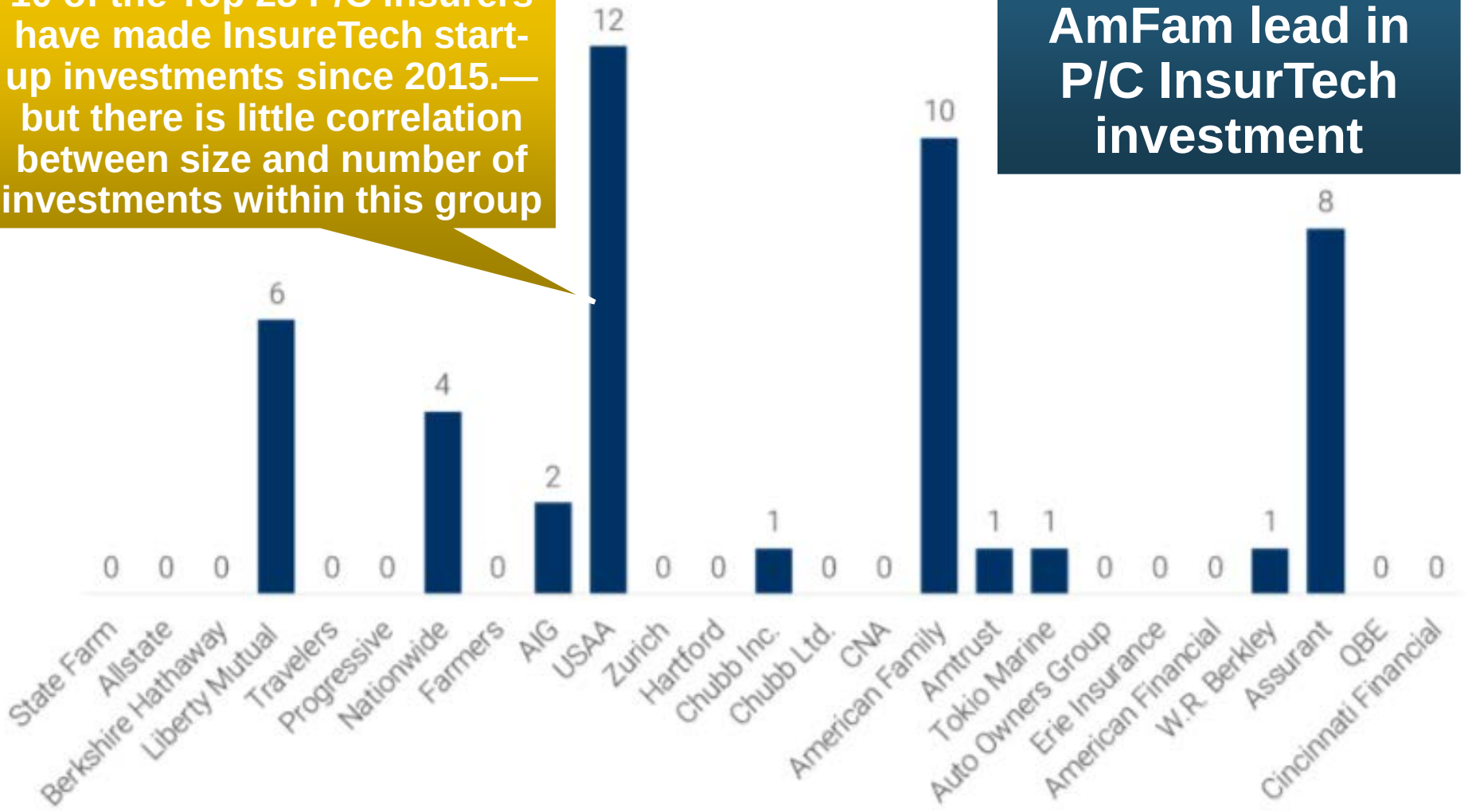


Source: Panorama by McKinsey, "*Insurance Beyond Digital: The Rise of Ecosystems and Platforms,"* Jan. 2018.

Start-Up InsurTech Investments by Top 25 P/C Insurers, 2015 - 2017*

10 of the Top 25 P/C insurers have made InsureTech start-up investments since 2015.—but there is little correlation between size and number of investments within this group

USAA and AmFam lead in P/C InsurTech investment



*As of June 23, 2017.

Sources: NAIC from CB Insights at https://www.cbinsights.com/blog/largest-pc-insurers-rank-startup-investments/

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Thank you for your time and your attention!

Twitter: twitter.com/bob_hartwig

For a copy of this presentation, email me at robert.hartwig@moore.sc.edu