



**INSURANCE
INFORMATION**
INSTITUTE

P/C Insurance Industry Overview & Outlook

Casualty Actuaries of Greater New York
May 24, 2018

James Lynch, FCAS, MAAA, Chief Actuary and Vice President, Research and Education
Insurance Information Institute ♦ 110 William Street ♦ New York, NY 10038
jamesl@iii.org ♦ www.iii.org

Who We Are and What We Do

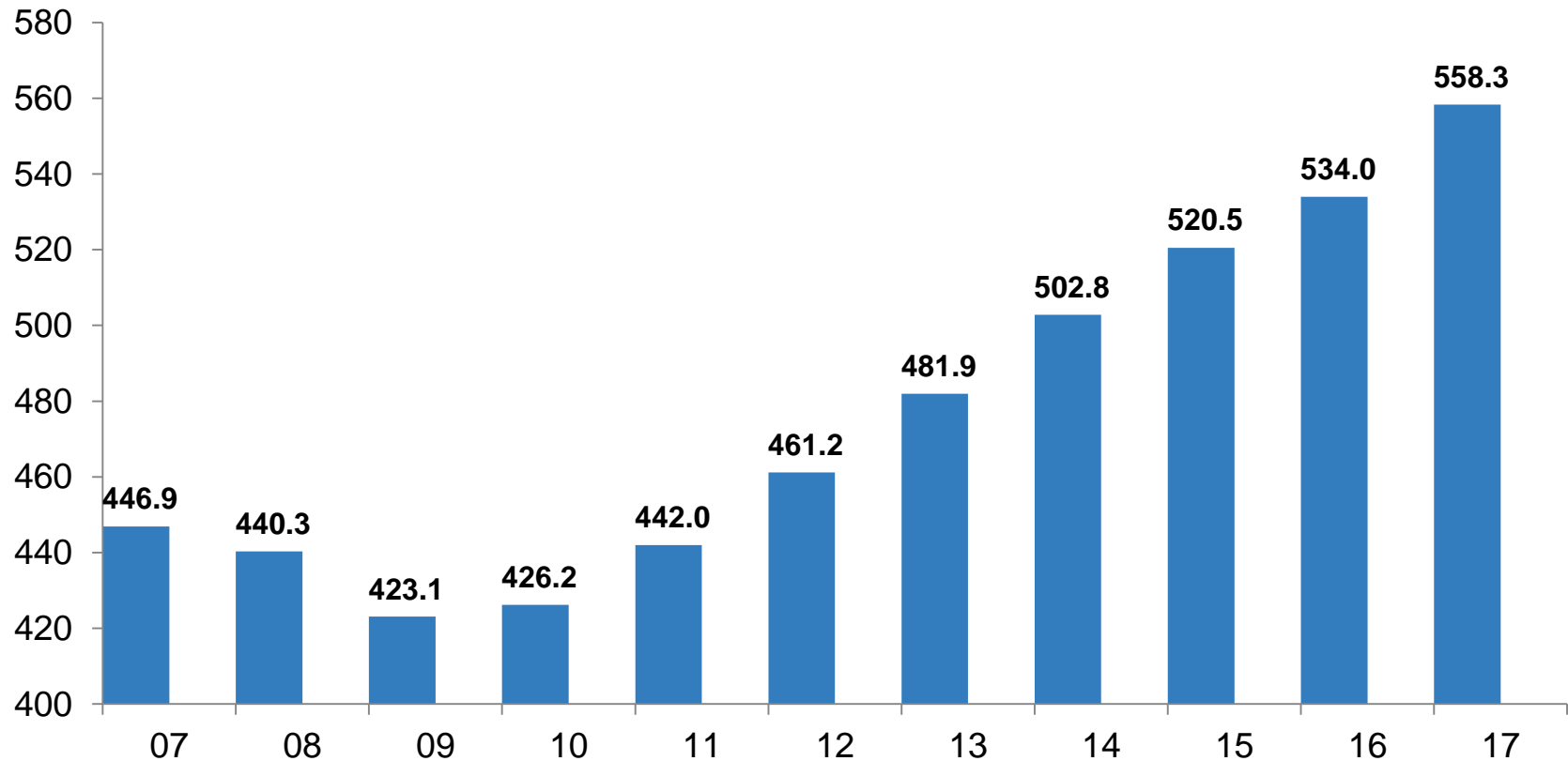
- ▲ The mission of the Insurance Information Institute is to *improve public understanding of insurance—what it does and how it works.*
- ▲ We Are...
 - ◆ A voice for the property/casualty insurance industry.
 - ◆ The go-to source for credible and unbiased insurance information for the media, the industry and consumers.
 - ◆ Dedicated to ensuring the media covers our business fairly and accurately.
 - ◆ Ready to assist our member companies with their communications, research and planning needs.
- ▲ We do not lobby.



P/C Financials, 2017 Q4

Net Written Premium by Year

(\$ Billions)

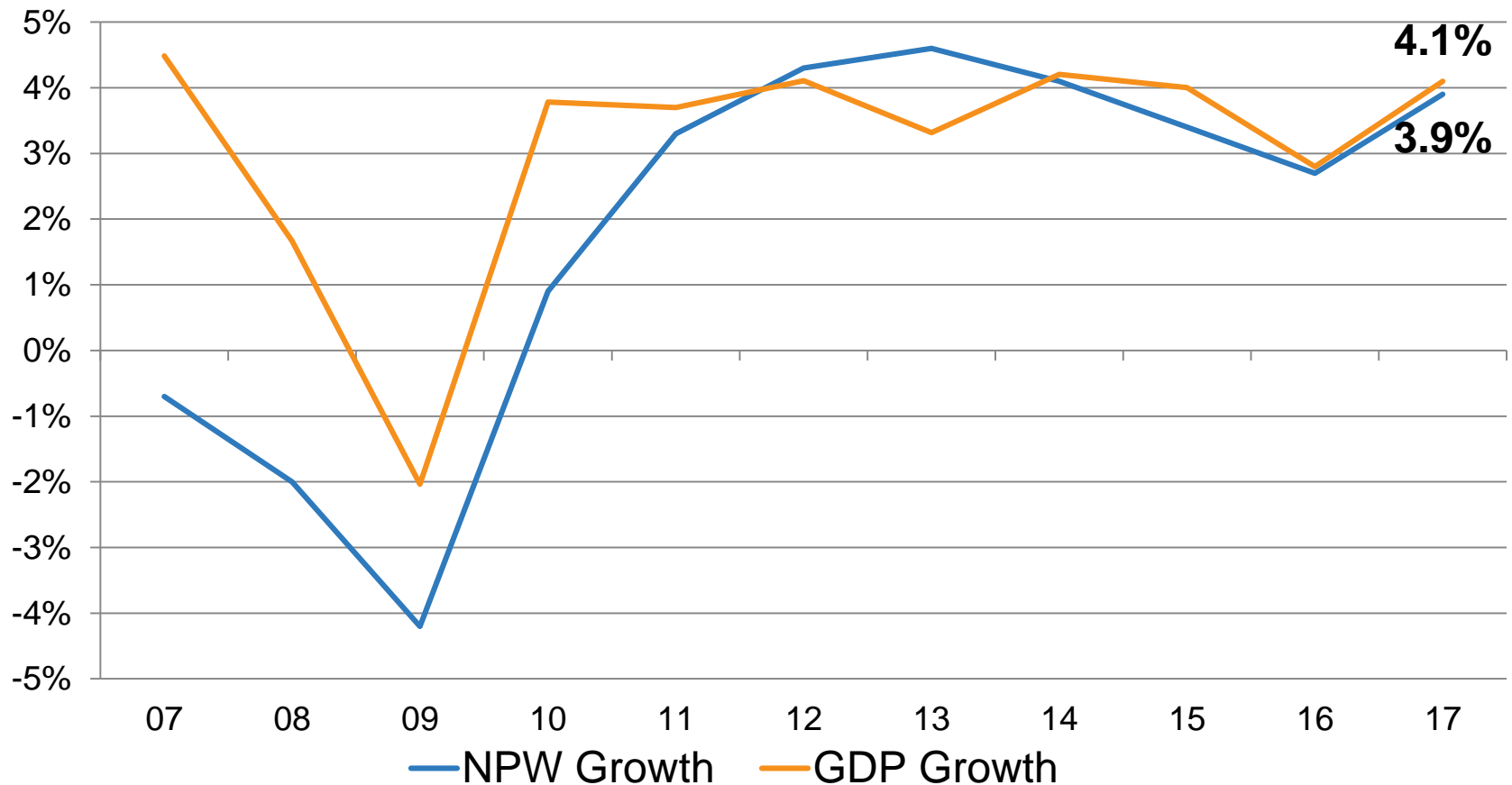


Steady Growth Since Last Recession – Following Overall Economic Trends.



Sources: A.M. Best (2007-2013), ISO (2014-16), Federal Reserve Bank of St. Louis (FRED), Insurance Information Institute.

Net Written Premium Growth



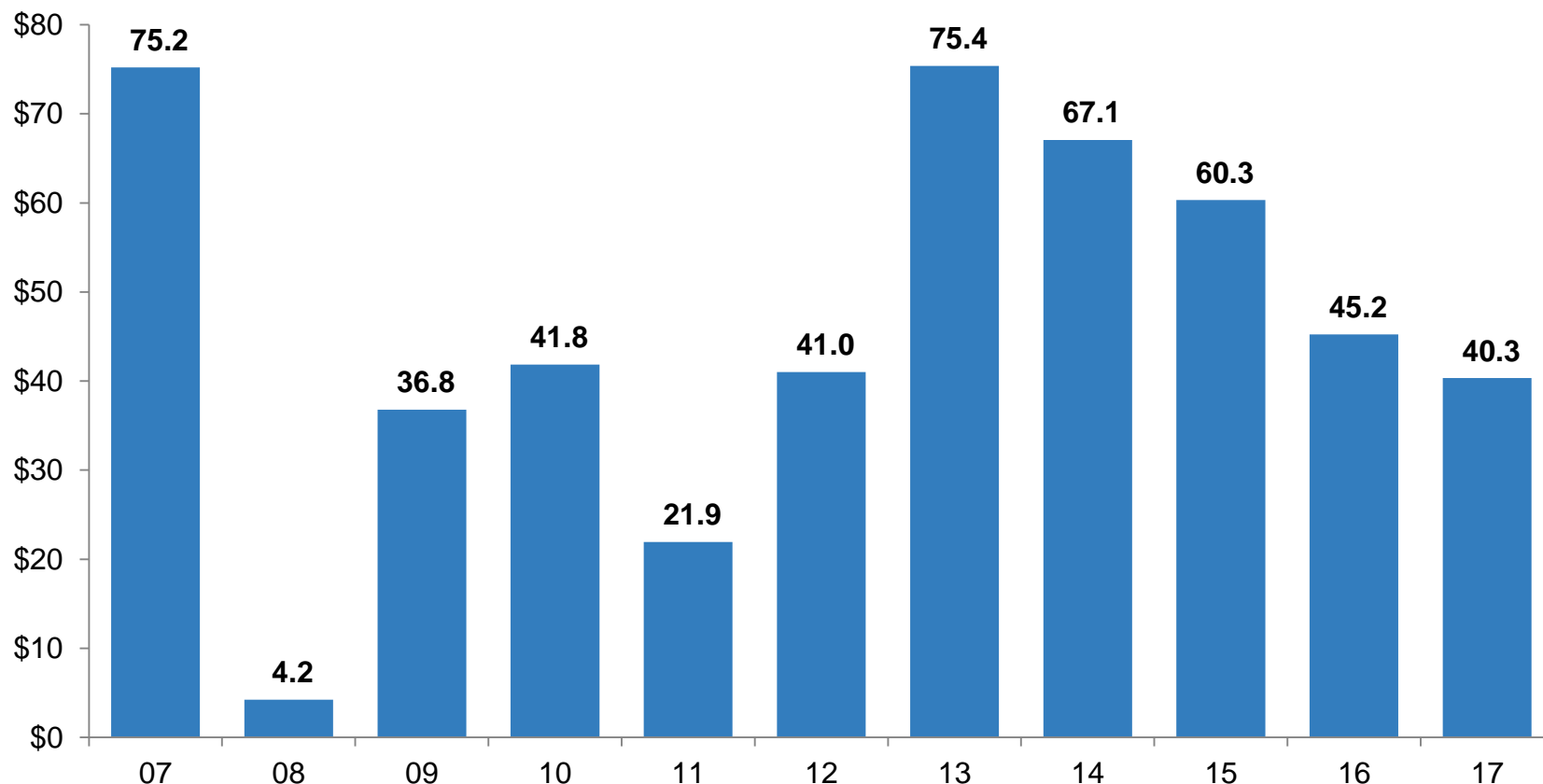
Premium Growth Continues to Follow Economic Growth and Inflation Trends.



Sources: A.M. Best (2007-2013), ISO (2014-16), Federal Reserve Bank of St. Louis (FRED), Insurance Information Institute.

P/C industry net income after taxes, 2007-2017

(Billions, 2017 dollars)

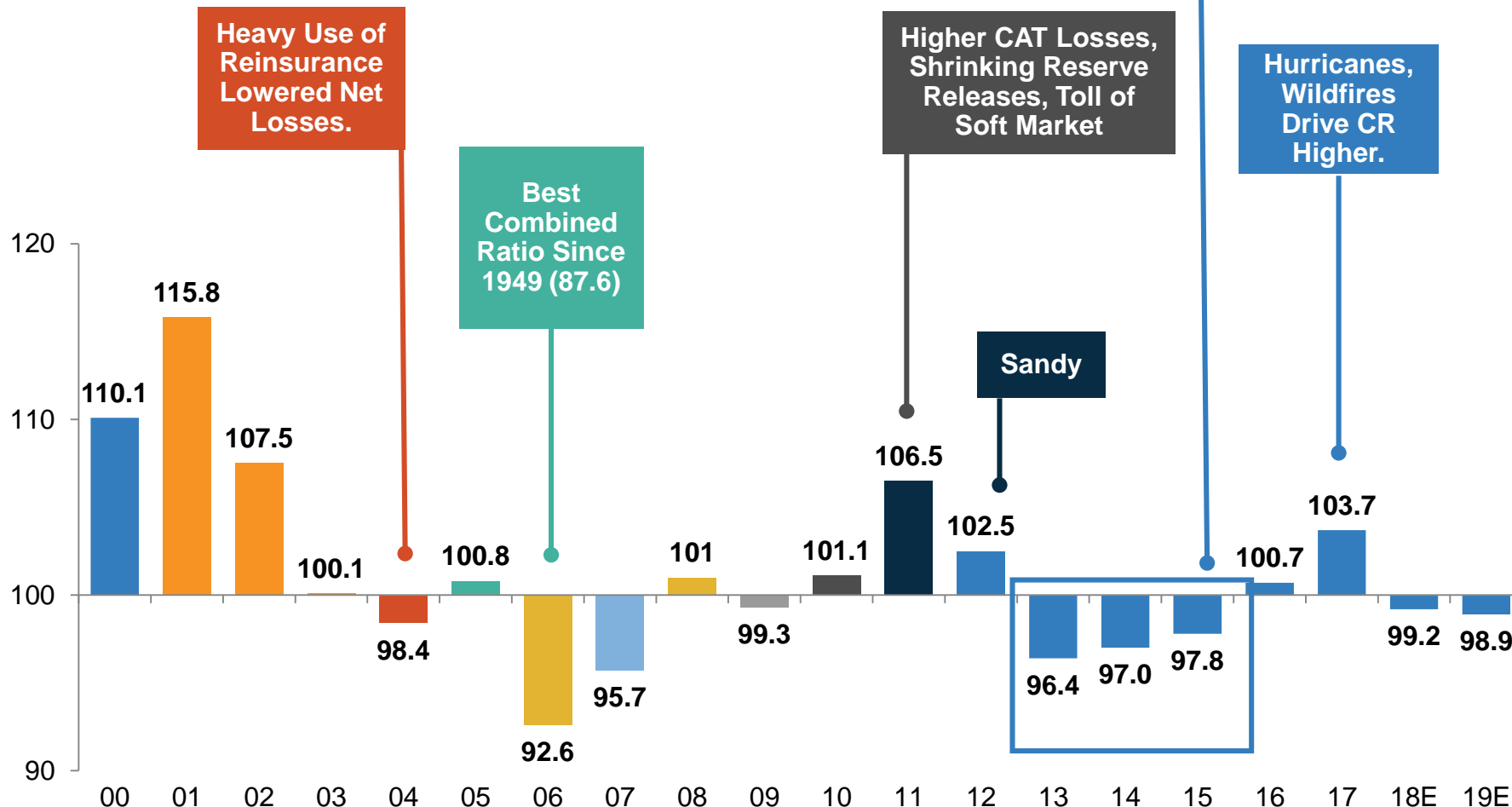


Catastrophes Drove Earnings Down in 2017, Continuing a Four-Year Slide in Inflation-Adjusted Profits.



Through fourth quarter. Adjusted for inflation using the BLS CPI calculator, to 2017 dollars.
Sources: NAIC data, sourced from S&P Global Market Intelligence; Insurance Information Institute.

P/C Insurance Industry Combined Ratio, 2000-2017*



*Excludes Mortgage & Financial Guaranty insurers 2008-2014.

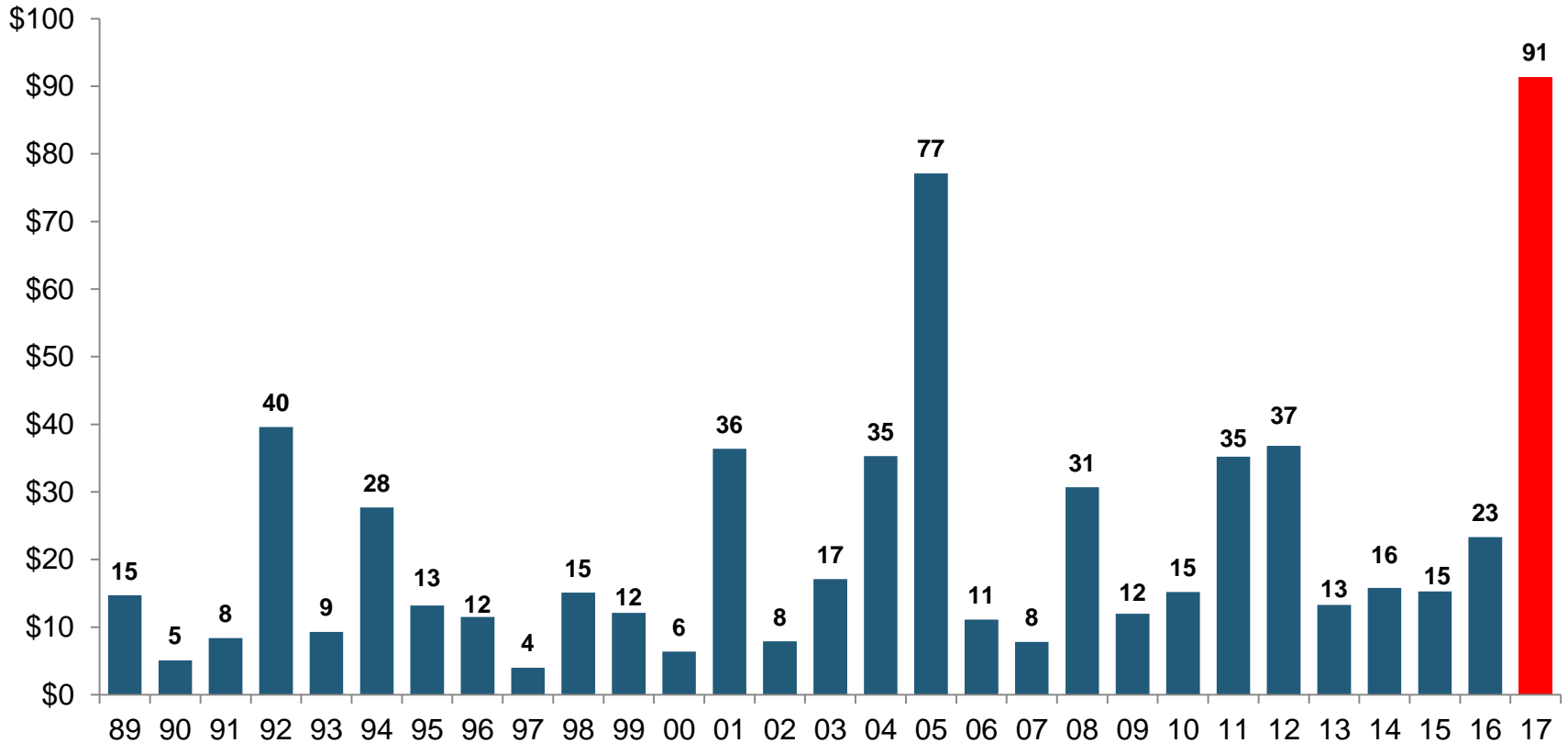
Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2; 2013: = 96.1; 2014: = 97.0.

Sources: A.M. Best; ISO, a Verisk Analytics company; I.I.I. estimate for 2017.



U.S. Insured Catastrophe Losses

(Billions, 2016 dollars)

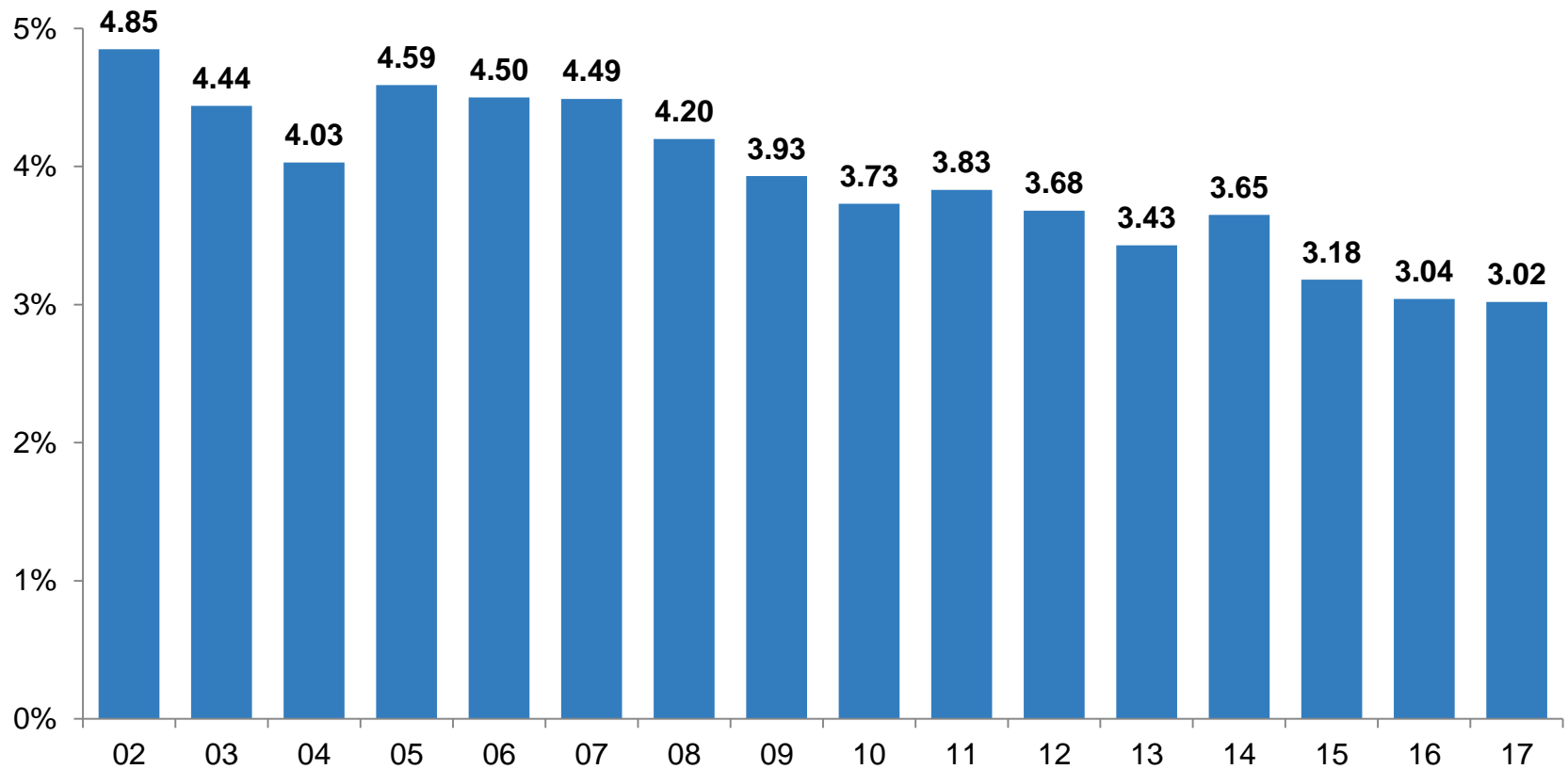


Harvey, Irma and Maria Losses Made 2017 a Record Cat Year.



Sources: Property Claims Service, a Verisk Analytics business; Insurance Information Institute.

P/C Insurer Portfolio Yields



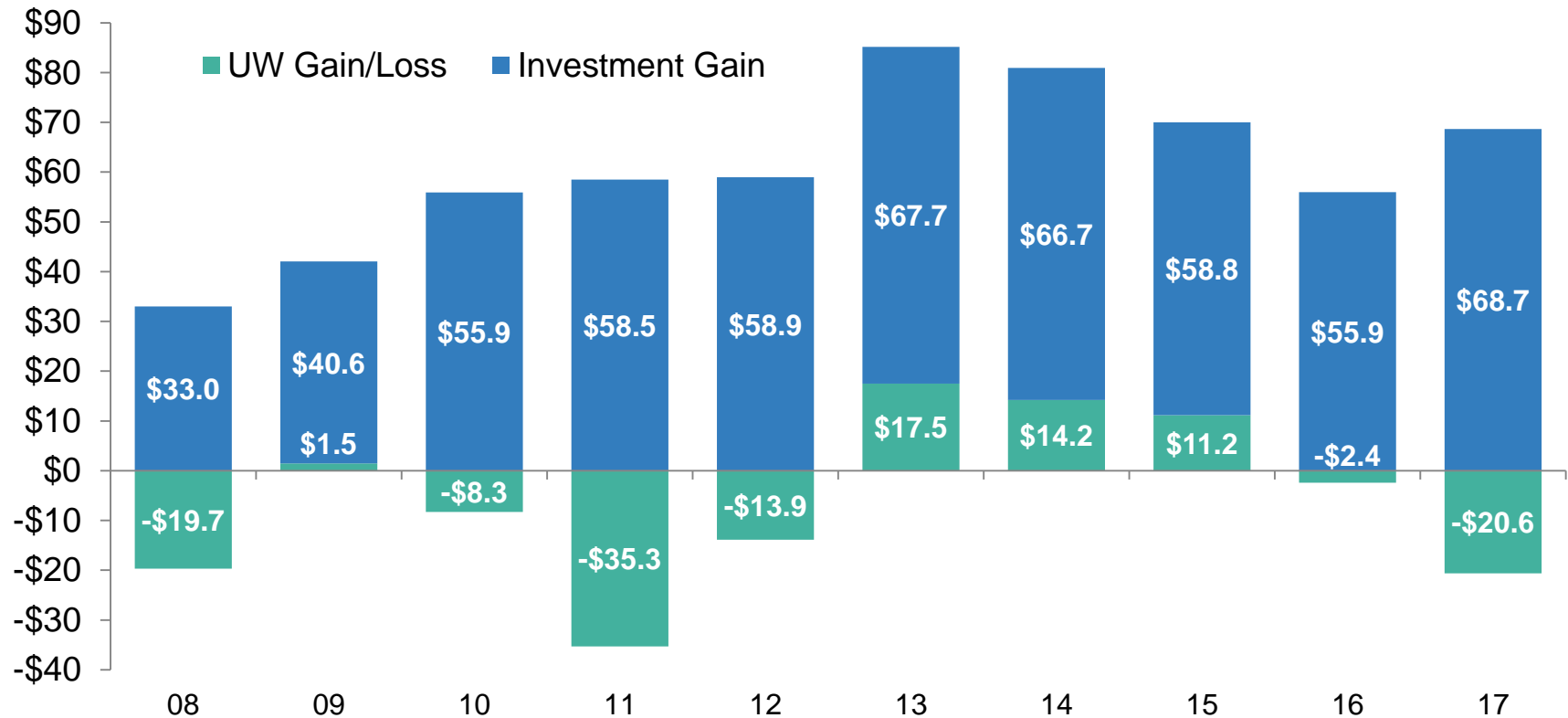
Yields Have Been Falling for Over a Decade, Reflecting the Long Downward Trend in Prevailing Interest Rates.



Sources: NAIC data, sourced from S&P Global Market Intelligence.

Key sources of P/C insurer profits

\$ Billions



Worst Underwriting Result in Six Years – Best Investment Gain in Over a Decade.



Data are before taxes and exclude extraordinary items.

Source: NAIC data, sourced from S&P Global Market Intelligence.

Sources of Investment Gains

\$ Billions



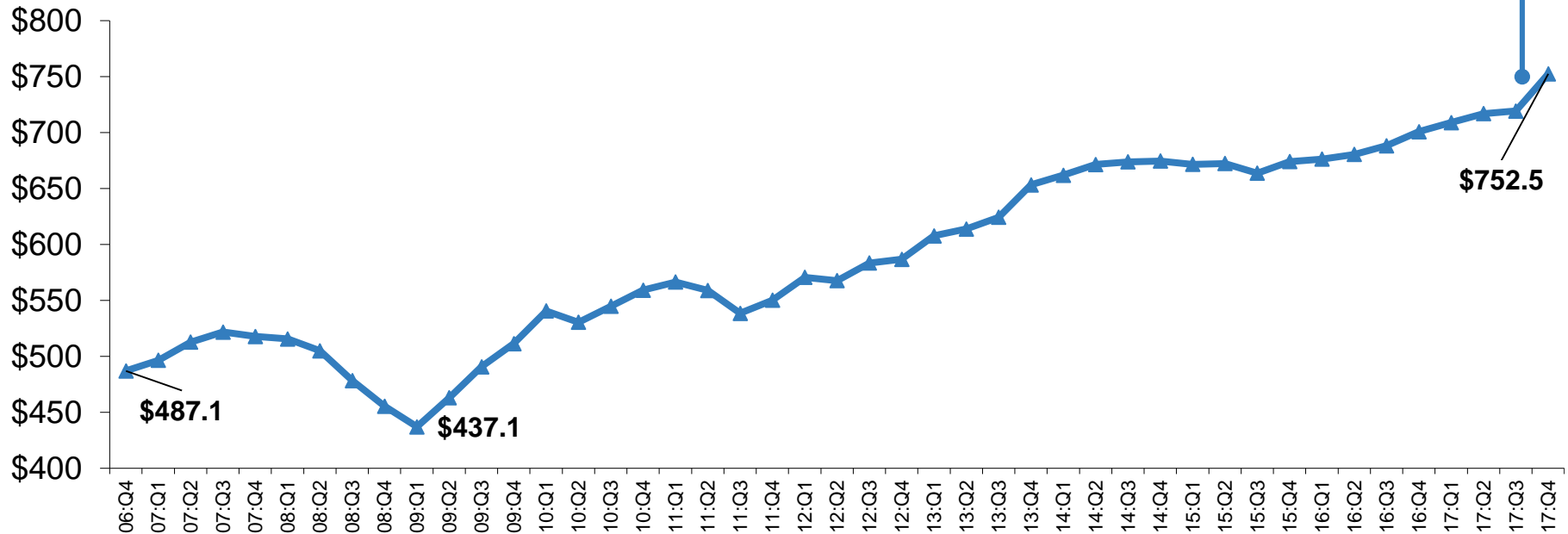
Investment Income Holds Steady – But a Great Year for Capital Gains.



Source: NAIC data, sourced from S&P Global Market Intelligence.

Policyholder Surplus

(\$ Billions)



The industry now has \$1 of surplus for every \$0.73 of NPW, 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 is, in 2017, in very strong financial condition.



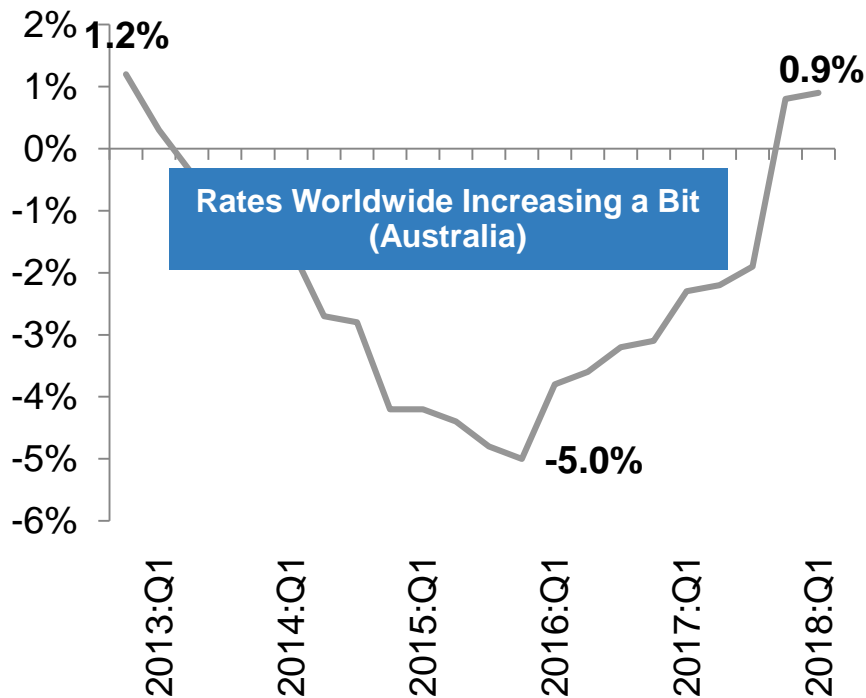
Sources: ISO, A.M. Best.

Commercial Rates

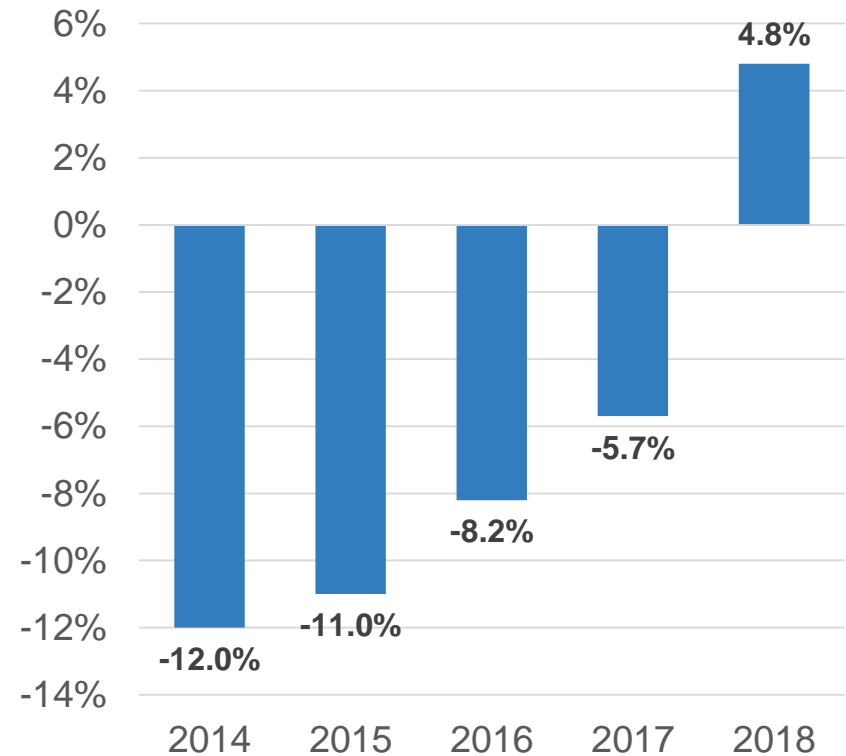
Rate Changes Worldwide

Rates Soft/Flat, Especially in Reinsurance

Global Insurance Rates

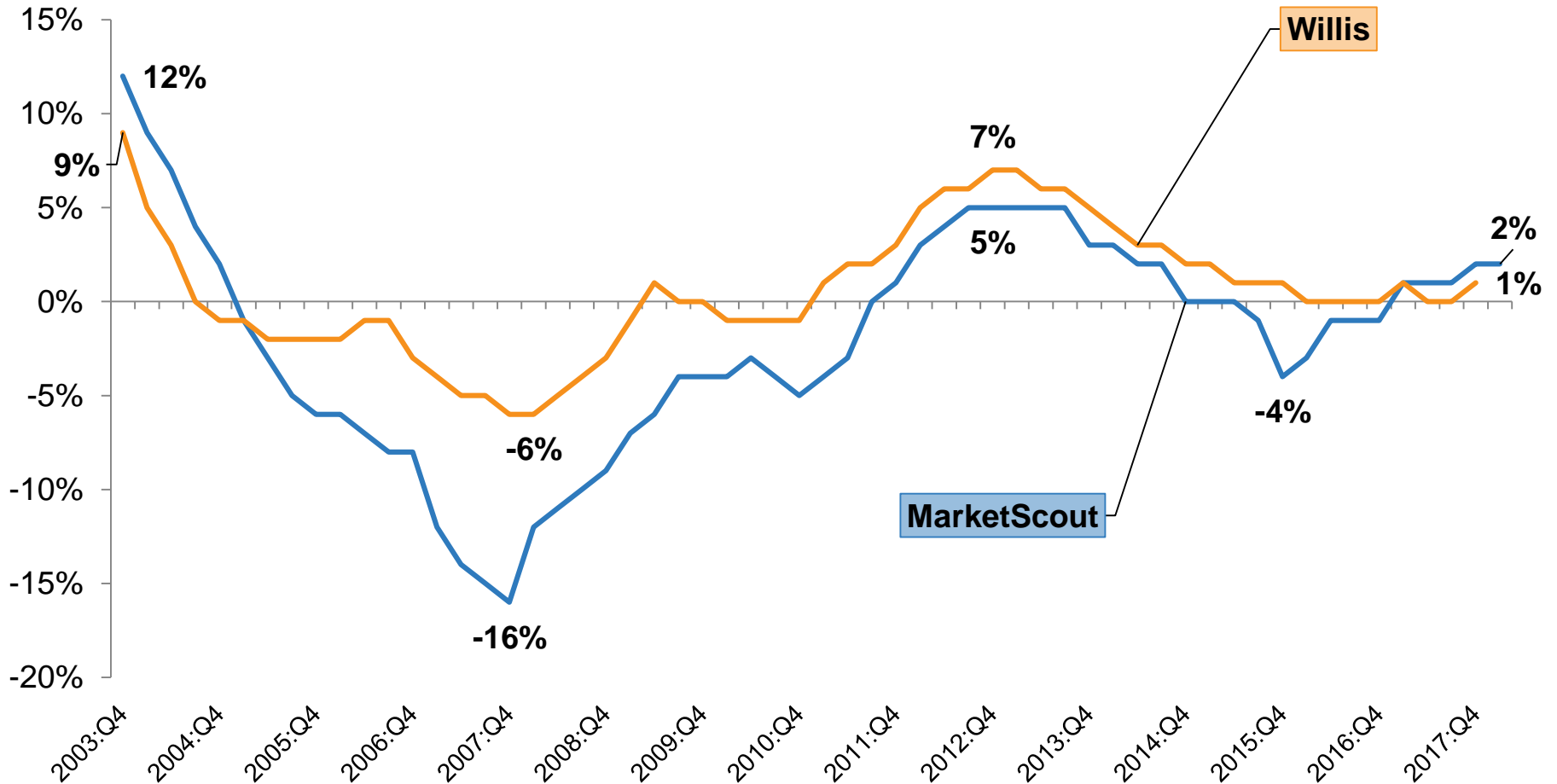


Global Reinsurance January Renewals



Sources: Marsh Insurance Market Index, JLT Re.

Commercial Lines Rate Change



We're in a Long Period of Flat Rates Overall.

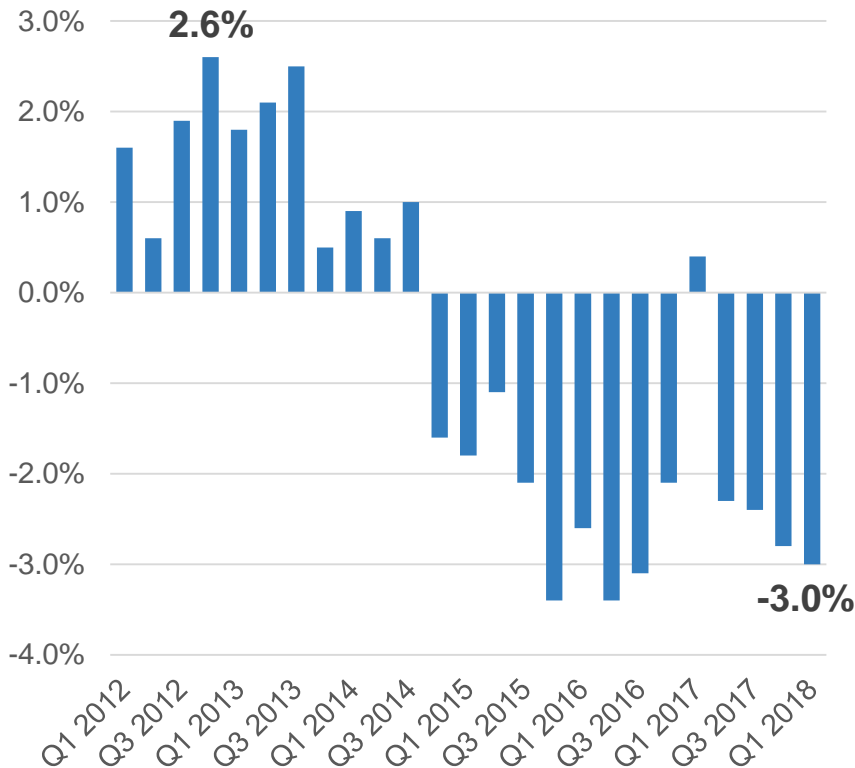


Sources: Willis Towers Watson, MarketScout.

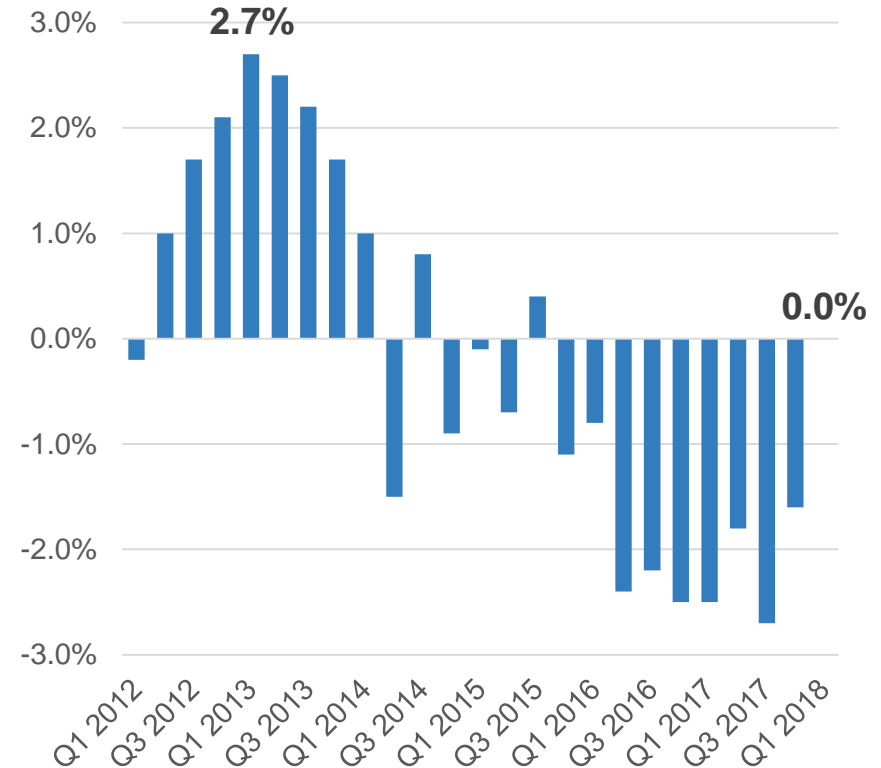
Liability Rate Changes

Slight Softening, Though Local Markets Vary

U.S. Casualty



U.S. Financial and Prof Liab

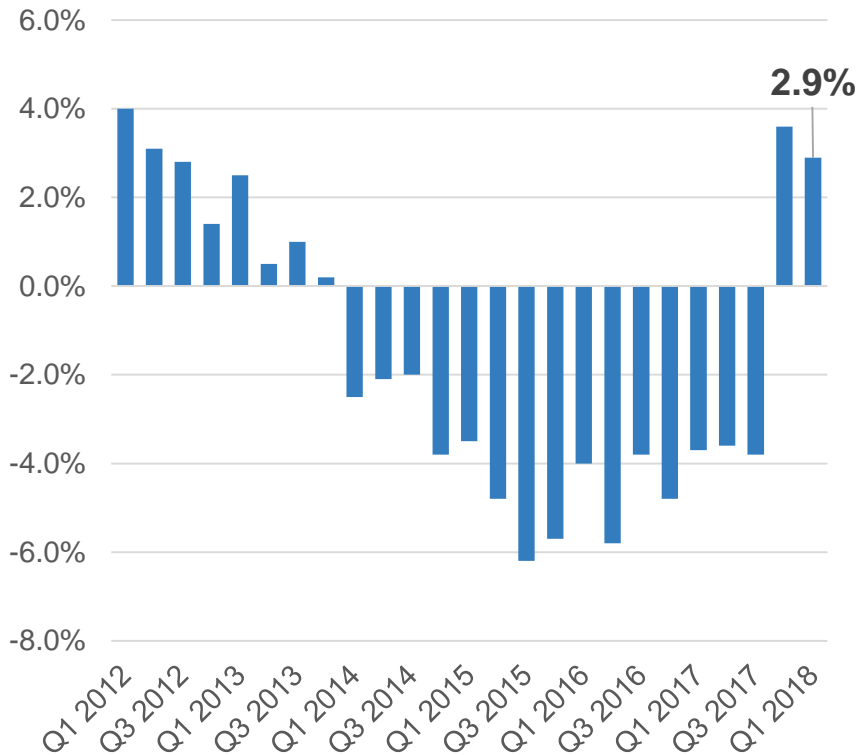


SOURCE: Marsh Insurance Market Index.

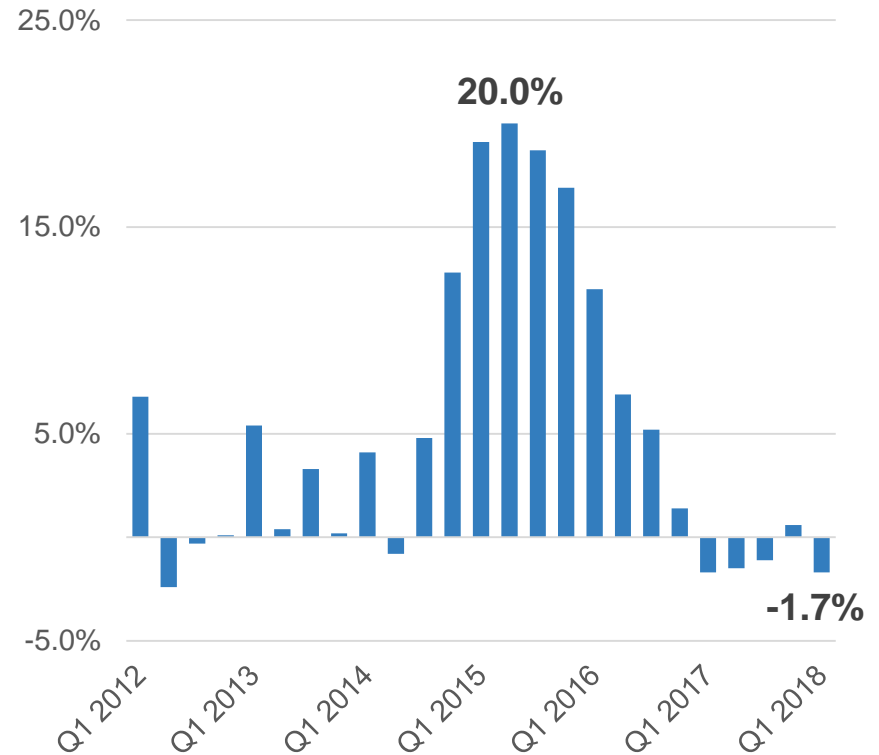
Property/Cyber Rate Changes

Slight Softening, Though Local Markets Vary

U.S. Property

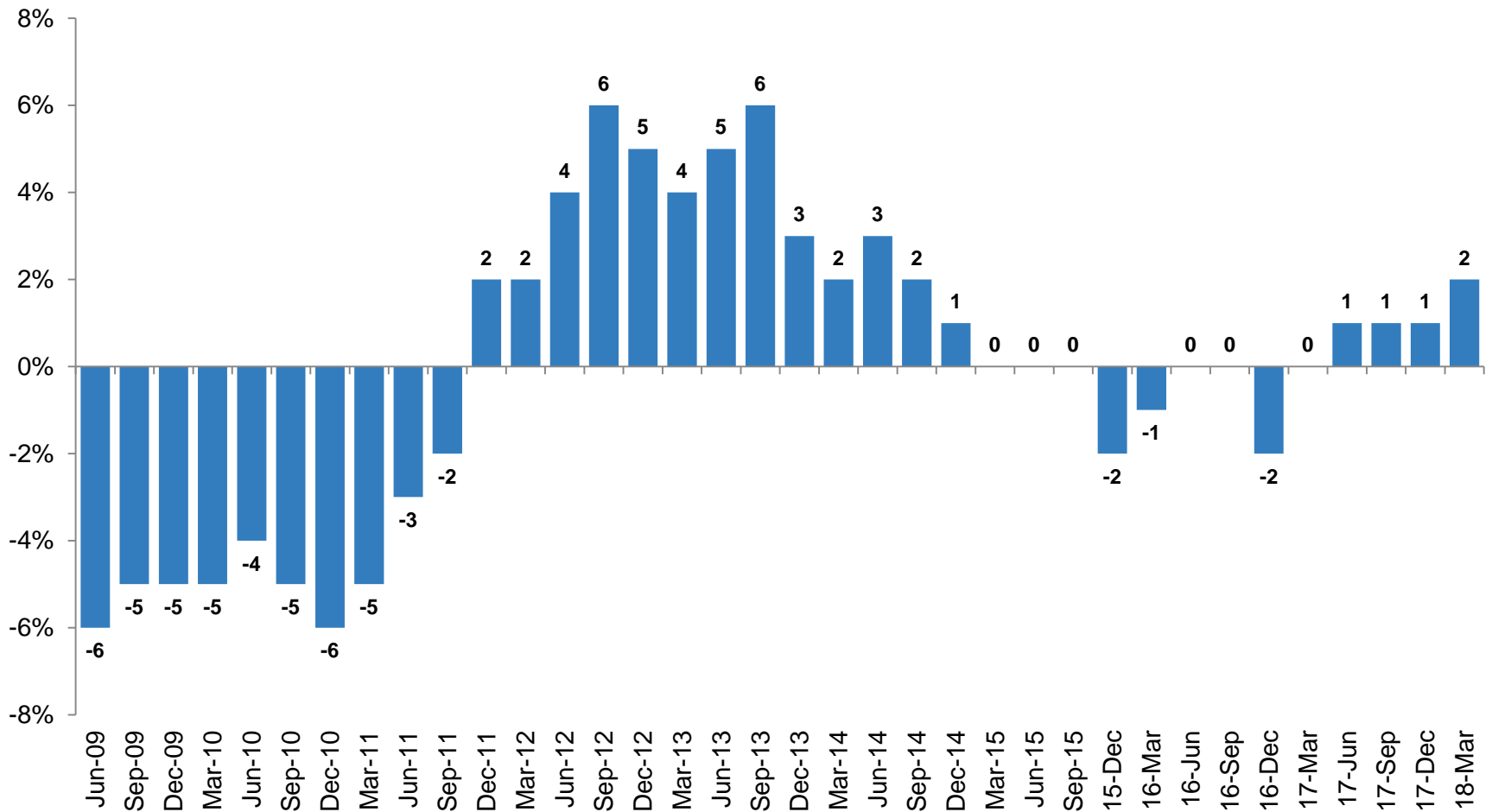


U.S. Cyber

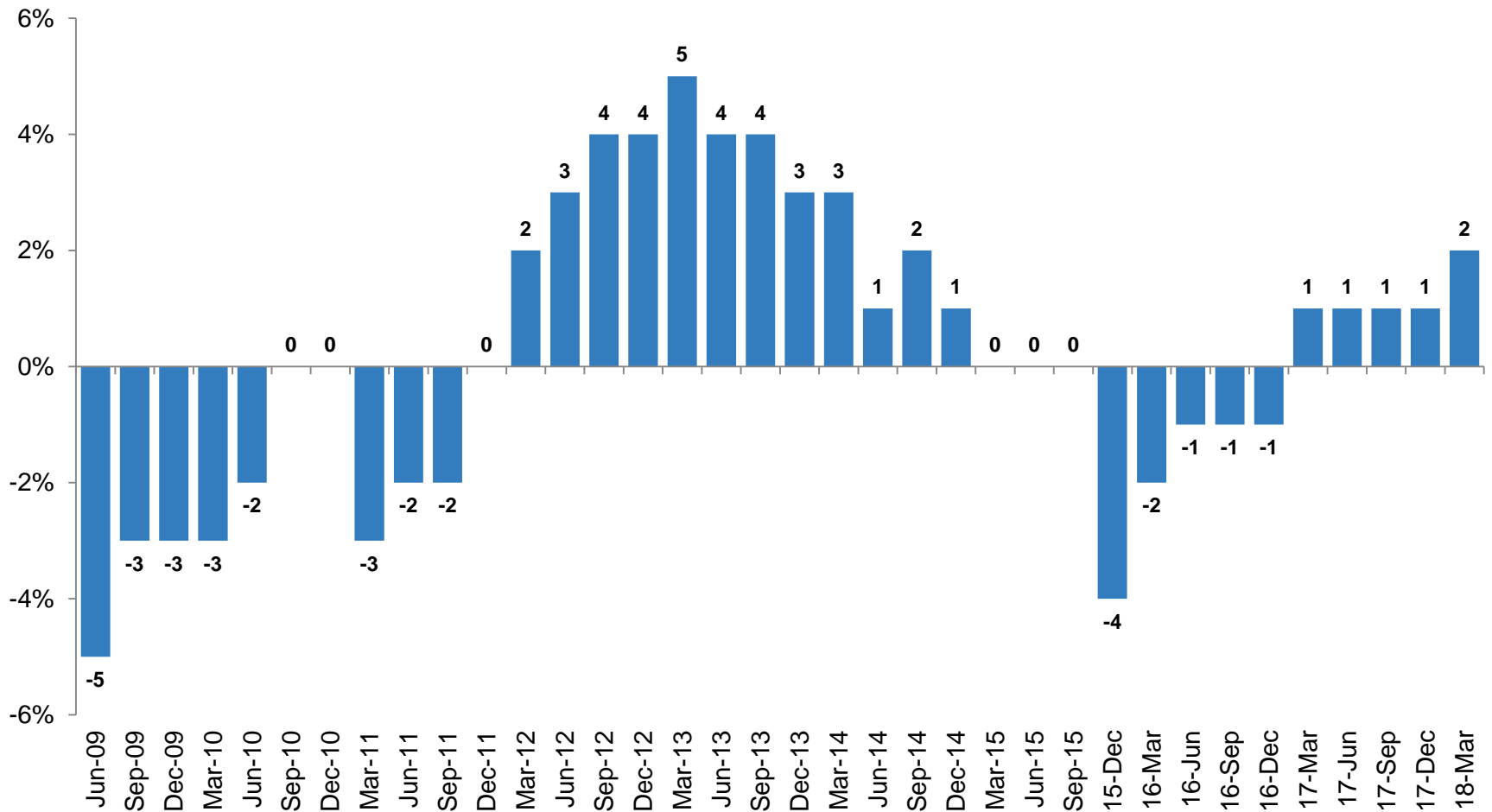


SOURCE: Marsh Insurance Market Index.

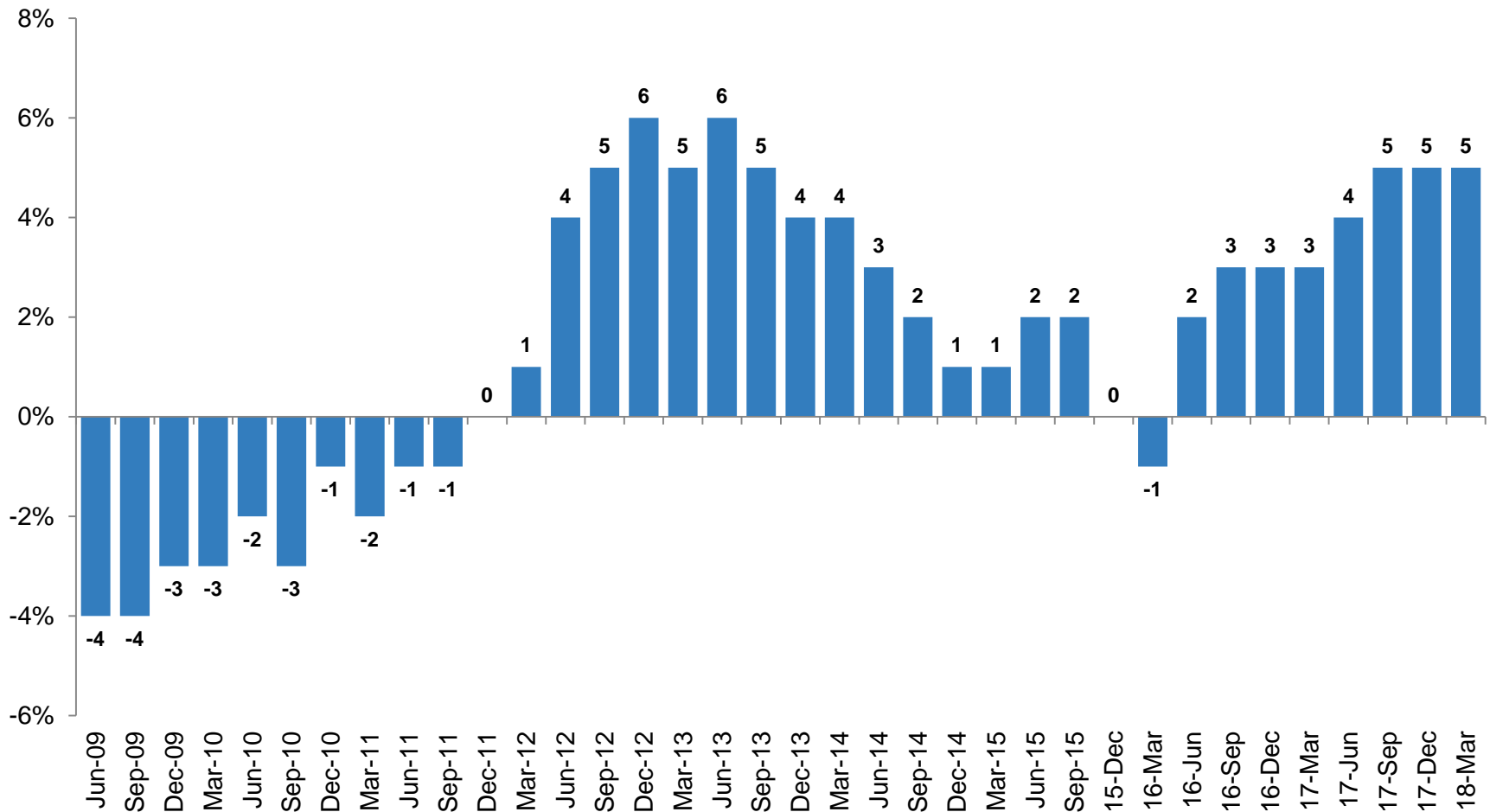
General Liability Rate Change (vs. Year Earlier)



Umbrella/Excess Rate Change (vs. Year Earlier)

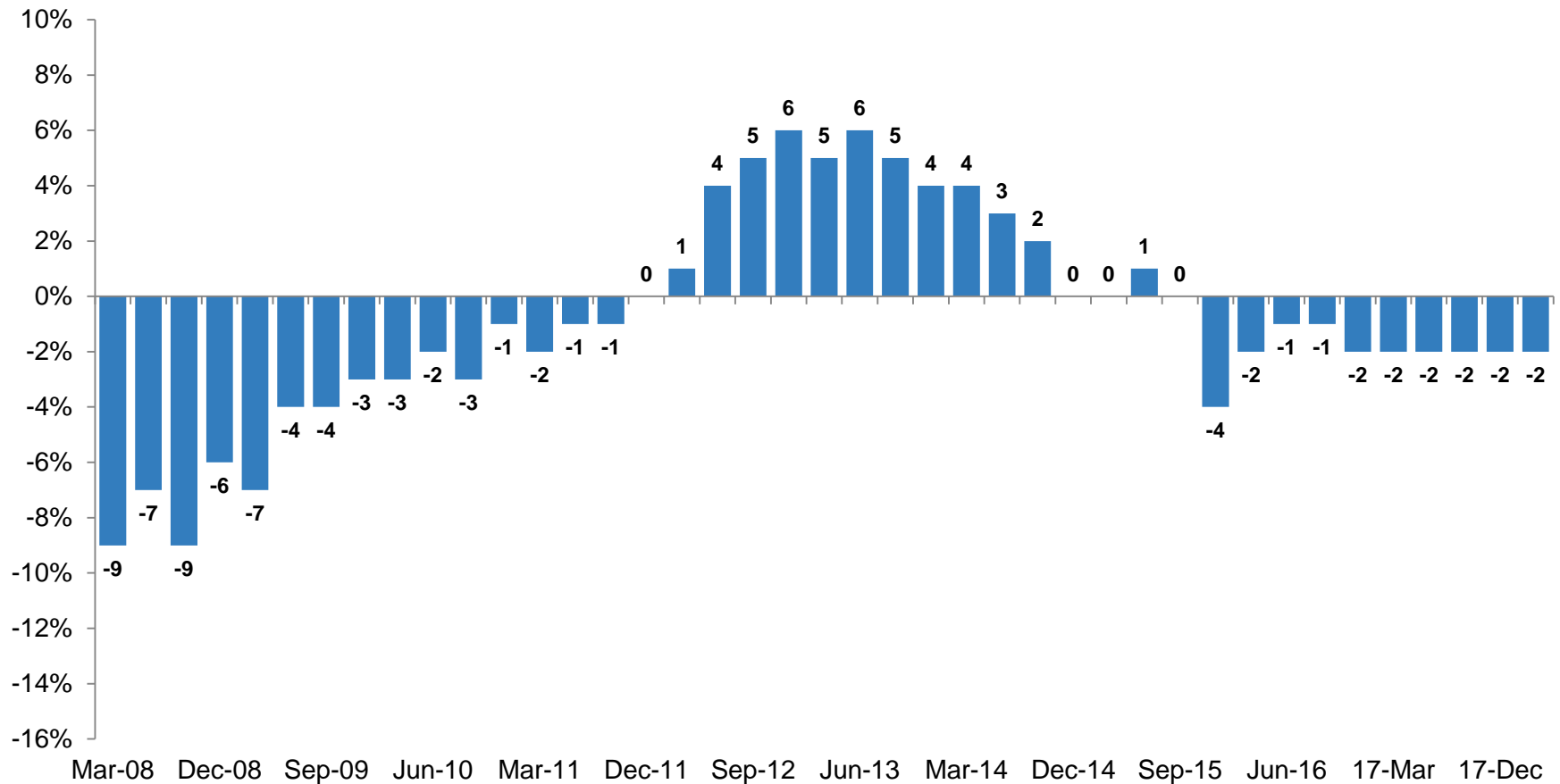


Commercial Auto Rate Change (vs. Year Earlier)



Sources: MarketScout, Insurance Information Institute.

Workers Comp Rate Change (vs. Year Earlier)

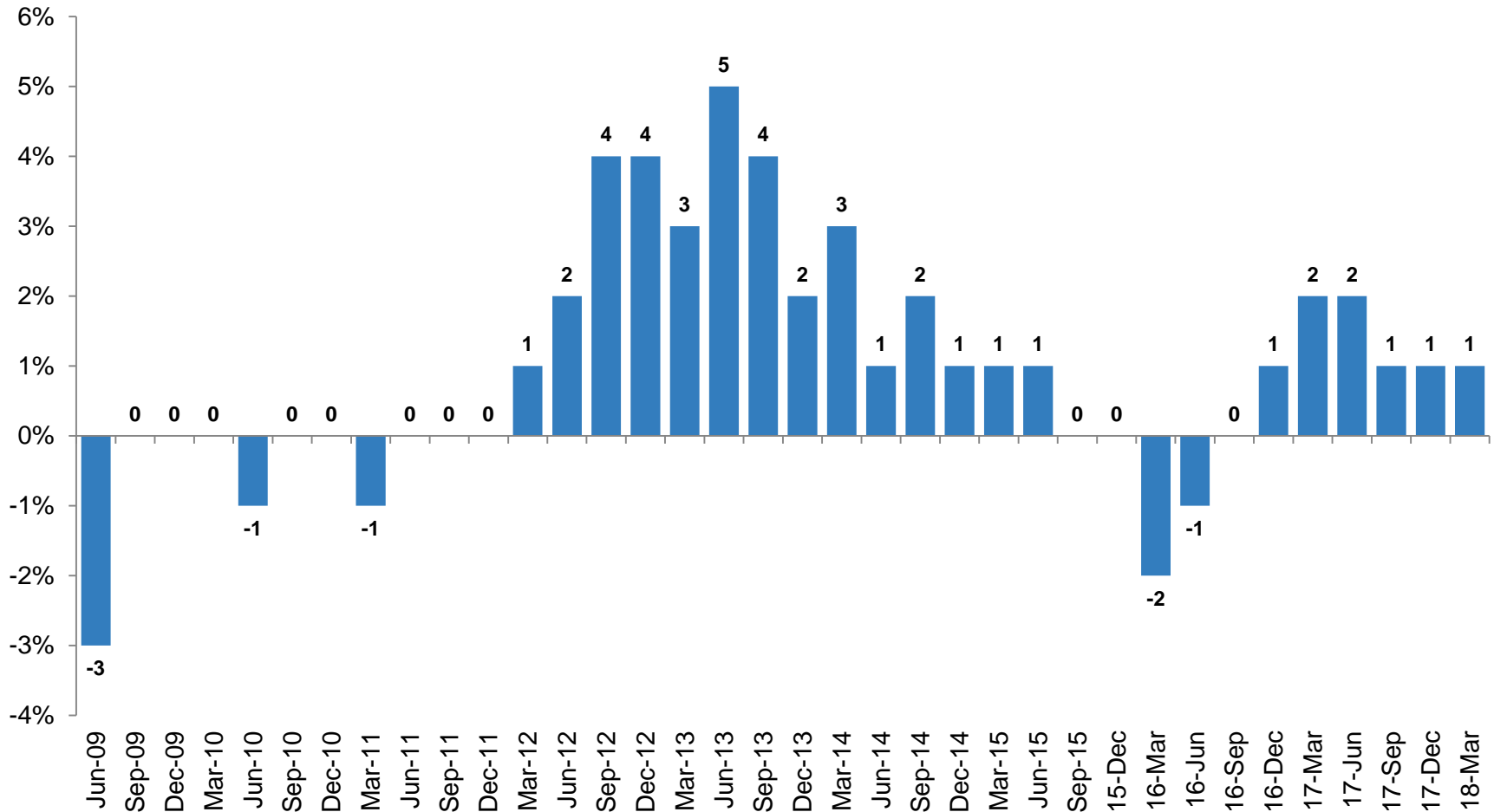


Workers Comp Rates Often Have Their Own Dynamic Apart from Market



Sources: MarketScout, Insurance Information Institute.

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

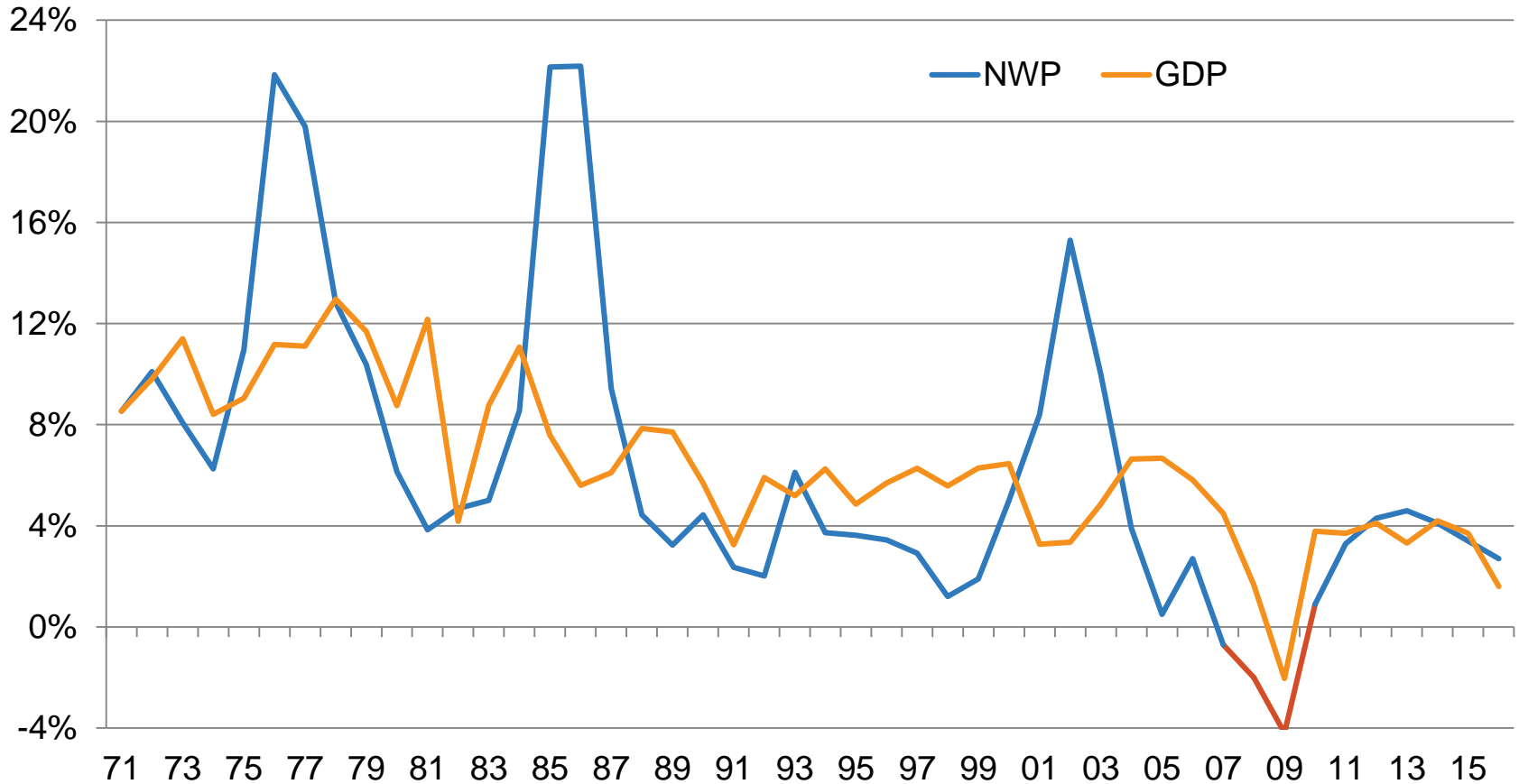


Sources: MarketScout, Insurance Information Institute.

Hard Market/Soft Market

Three “Hard Markets” in the Last 45 Years

Net Premium Growth (All P/C Lines) vs. Nominal GDP: Annual Change, 1971-2016



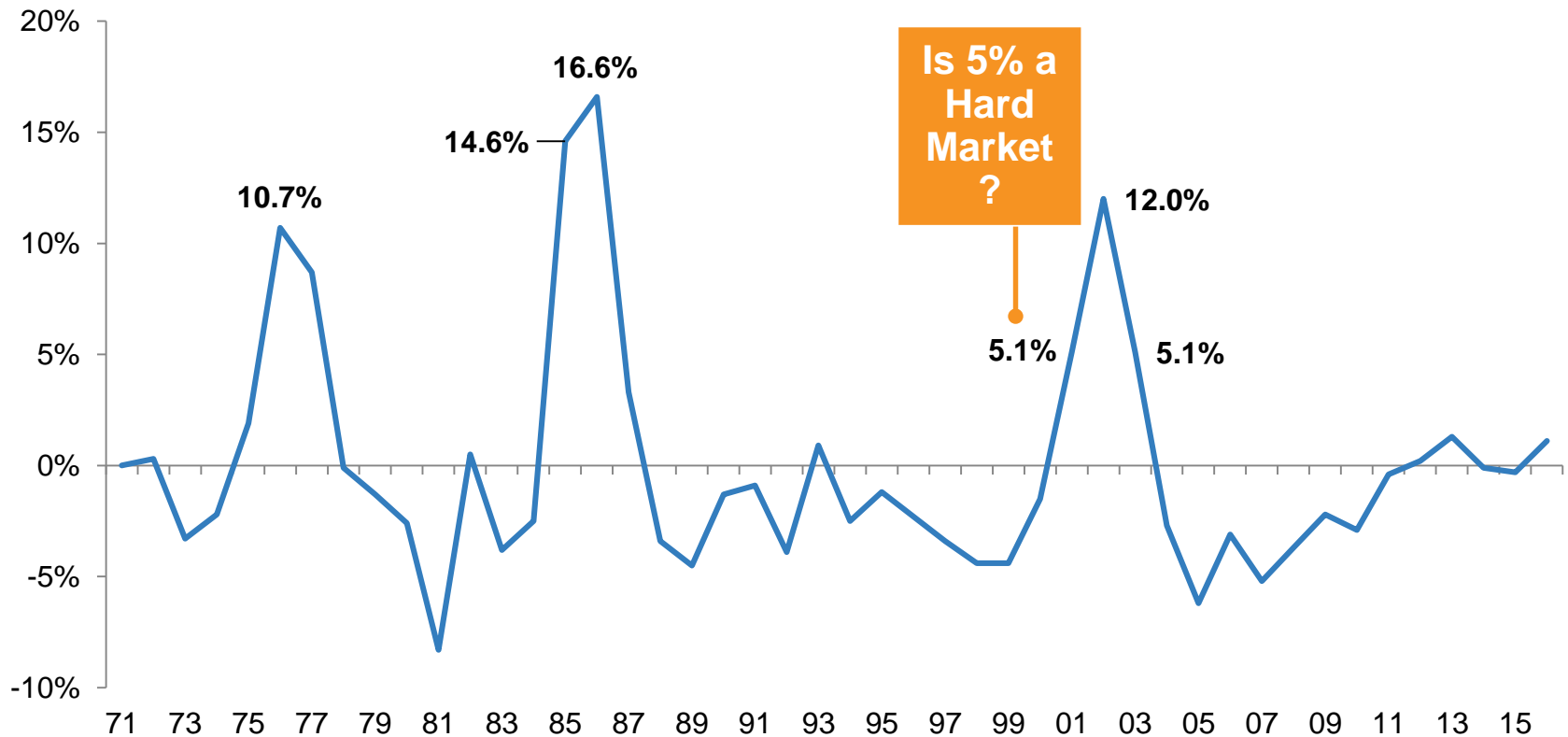
▼ The three “hard markets” in this 45-year span were in 1976–77, 1985–86, and 2001–03.



Sources: A.M. Best (1971-2013), ISO (2014-16); U.S. Commerce Dept., Bureau of Economic Analysis; I.I.I.

Three Hard Markets in the Last 45 Years

Net Premium Growth (All P/C Lines) Minus Nominal GDP, Annual Change



▼ The three “hard markets” in this 45-year span were in 1976–77, 1985–86, and 2001–03.



Sources: A.M. Best (1971-2017), ISO (2014-16), A.M. Best, Insurance Information Institute (1986-1994); U.S. Commerce Dept., Bureau of Economic Analysis; Insurance Information Institute calculations.

I.I.I. Hypothesis

What causes a hard market?

- ▲ Return on equity falls to 4% or below?
- ▲ Surplus drops due to financial market declines and/or significant underwriting losses?
- ▲ Unusually large losses due to catastrophes?



P/C Industry ROE and Hard Markets

Year	ROE	NWP-GDP Growth in Following Year	Hard Market?
1975	2.4%	10.7%	Yes
1984	1.8%	14.6%	Yes
2001	-1.2%	12.0%	Yes
2002	2.1%	5.1%	Yes
2017	5.0%	?	?

Policyholder Surplus and Hard Markets

Year	Surplus Decline	NWP-GDP Growth in Following Year	Hard Market?
1984	-2.7%	14.6%	Yes
1999	-0.9%	-1.5%	No
2000	-4.7%	5.1%	Yes
2001	-8.0%	12.0%	Yes
2008	-12.5%	-2.2%	No
2011	-0.8%	0.2%	No
2017	+7.4%	?	?



CAT Claims and Hard Markets

Year	CAT Claims Over \$25 billion (2016 Adjusted)	NWP-GDP Growth in Following Year	Hard Market?
1992	\$39.6	0.9%	No
1994	\$27.7	-1.2%	No
2001	\$36.4	12.0%	Yes
2004	\$36.4	-6.2%	No
2005	\$77.1	-3.1%	No
2008	\$30.7	-2.2%	No
2011	\$35.2	0.2%	No
2012	\$36.8	1.3%	No
2017	\$90.5	?	?



Hard Market in 2017?

▲ **Strong indicator: $\leq 4\%$ ROE**

- ◆ Consistent hard markets in years comparisons.

▲ **Indifferent indicator: Surplus Increase/Decrease**

- ◆ Inconsistent hard/soft markets in years comparisons.

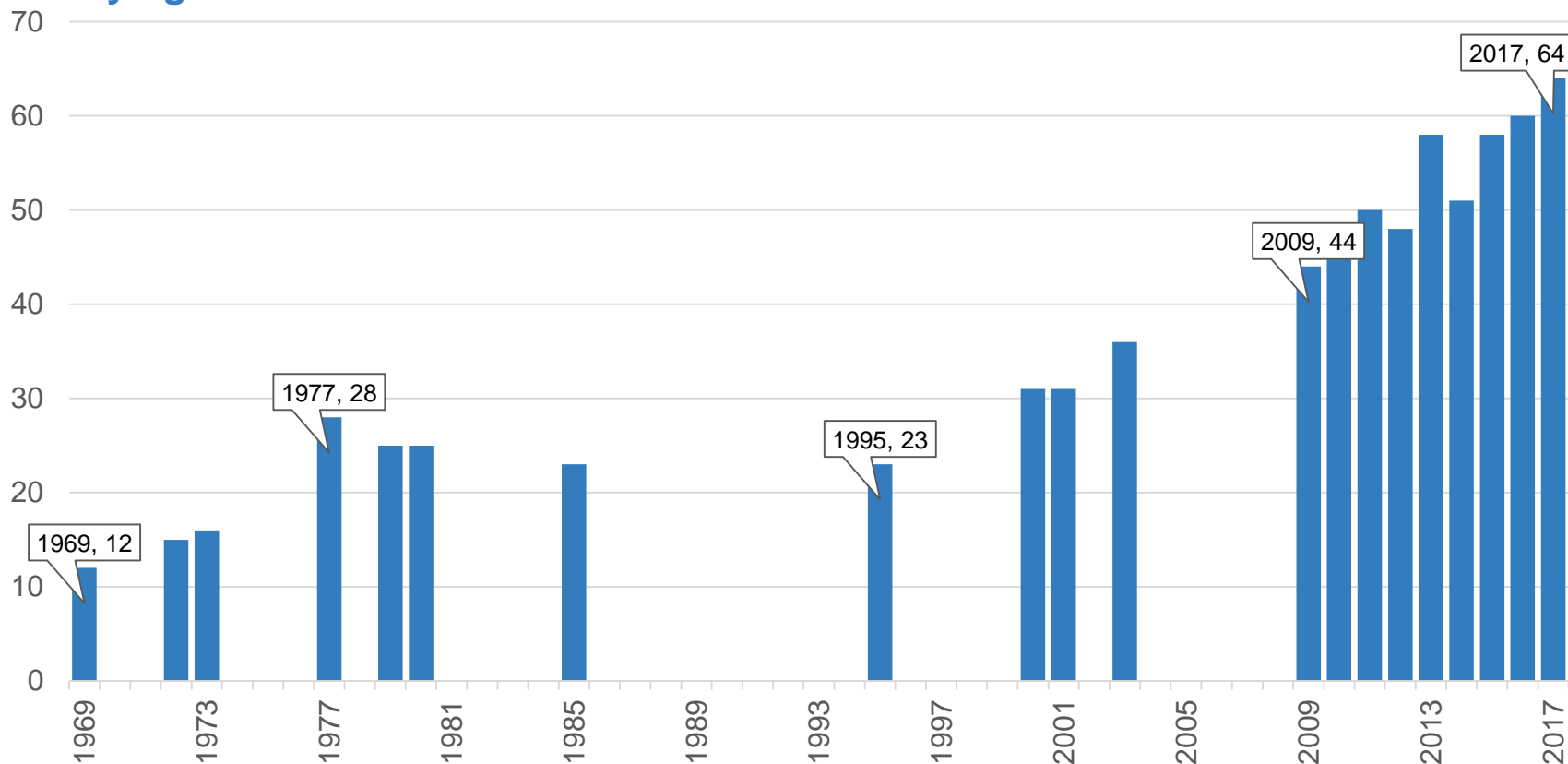
▲ **Weak indicator: Large Cat Losses**

- ◆ Consistent non-movement; even with 2017 potentially being one of the worst years on record.

Marijuana and Auto Insurance

Support for Legalization Grows

% Saying Yes



“Do You Think the Use of Marijuana Should Be Made Legal, Or Not?”

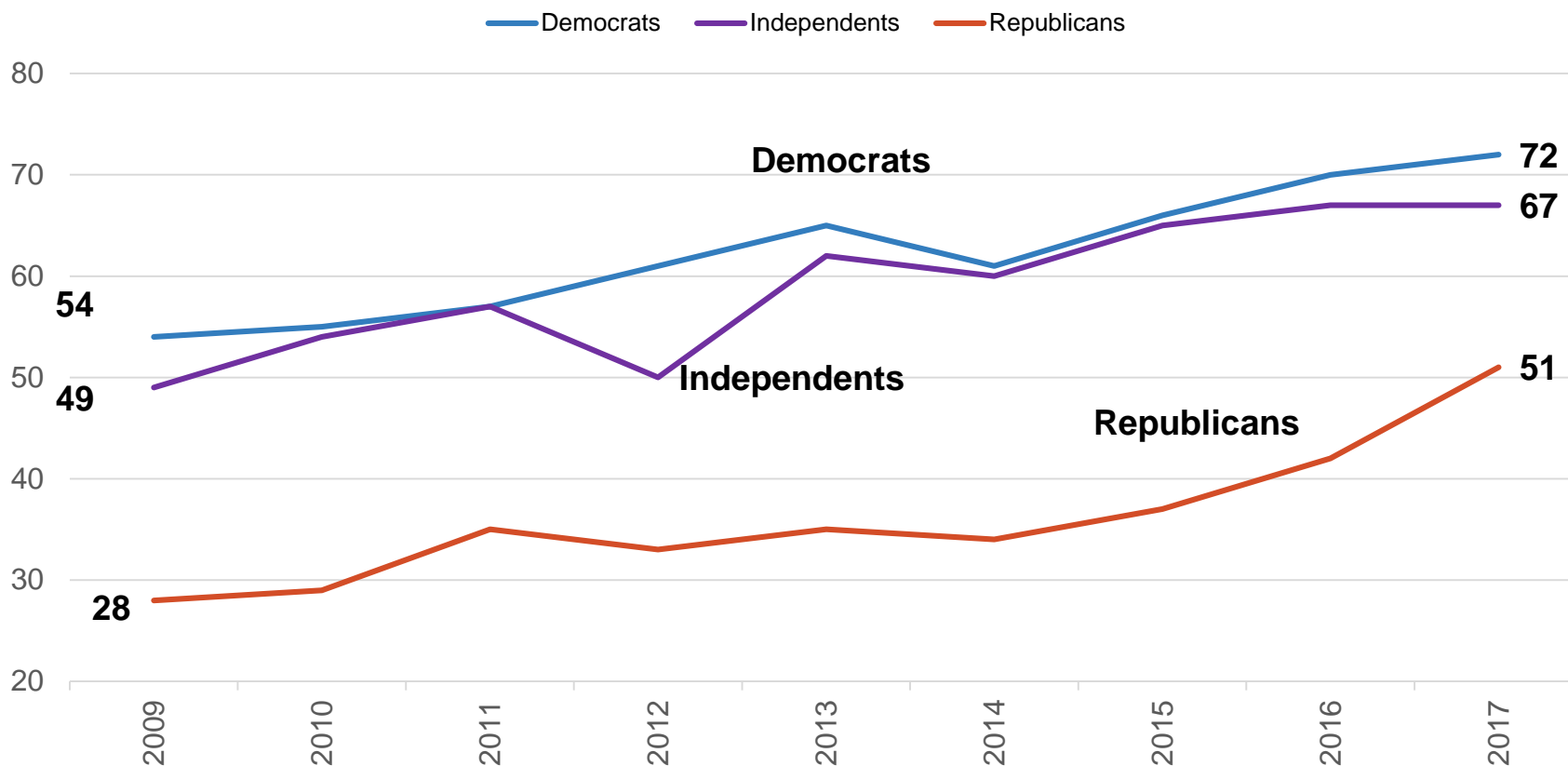


No survey in years where no data appears.

SOURCES: Gallup Poll Social Series, <http://news.gallup.com/file/poll/221027/171025Marijuana.pdf>.

Support for Legalization Grows

% Saying Yes



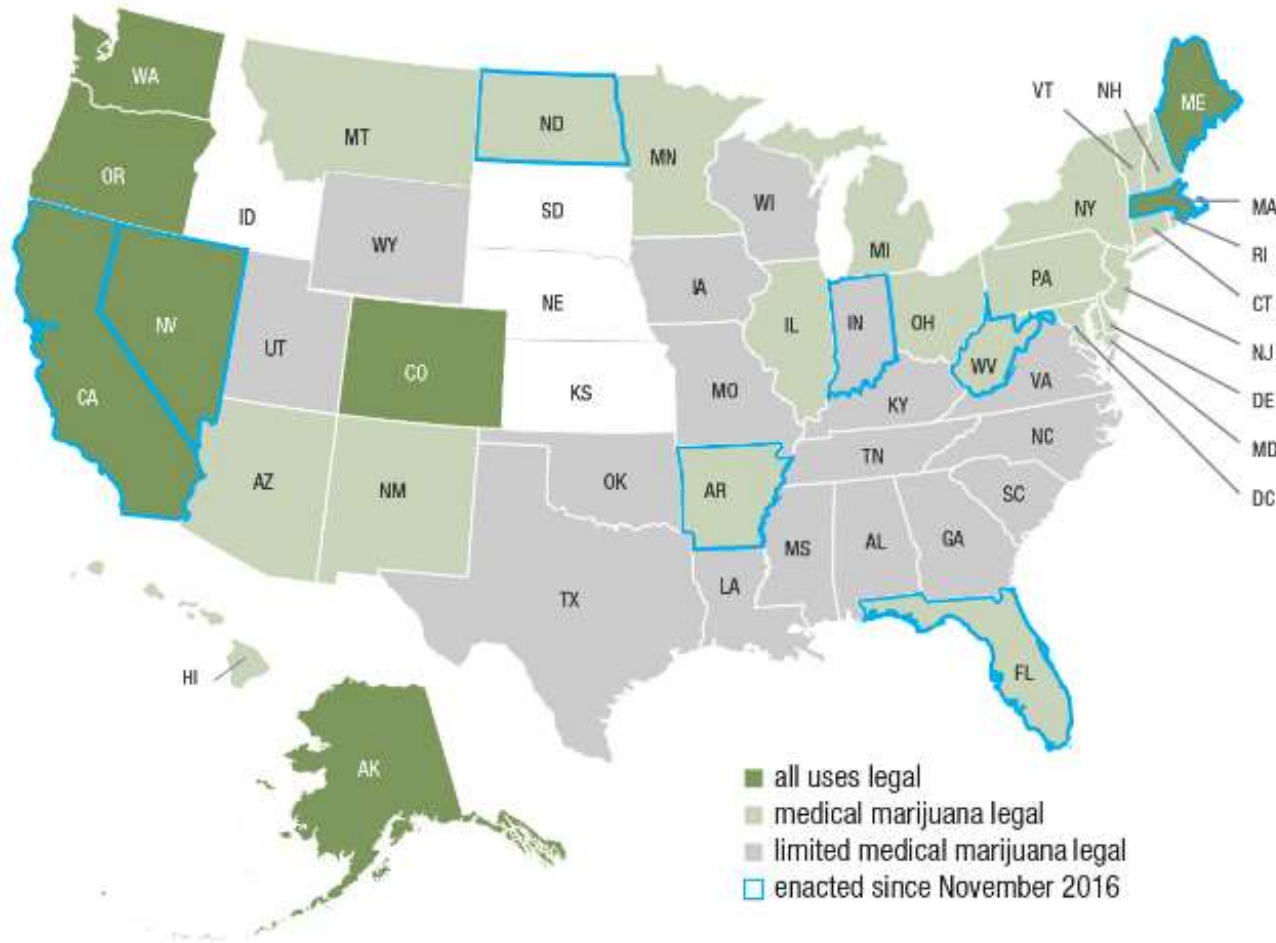
“Do You Think the Use of Marijuana Should Be Made Legal, Or Not?”



SOURCES: Gallup Poll Social Series, <http://news.gallup.com/poll/221018/record-high-support-legalizing-marijuana.aspx>

Cannabis in the USA

Legalization is Accelerating



Congressional Cannabis Caucus



Rohrbacher
(CA)



Blumenauer
(OR)



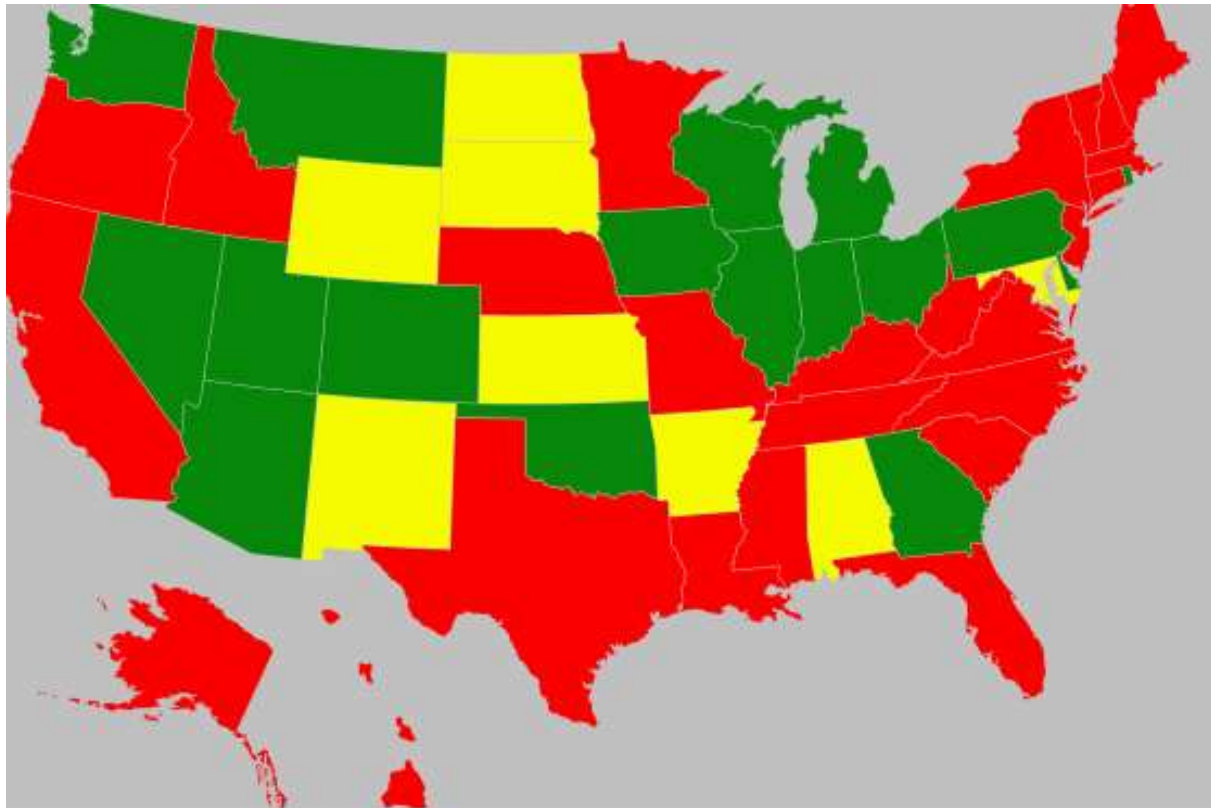
Young
(AK)



Polis
(CO)

Driving While High – the Legal Framework

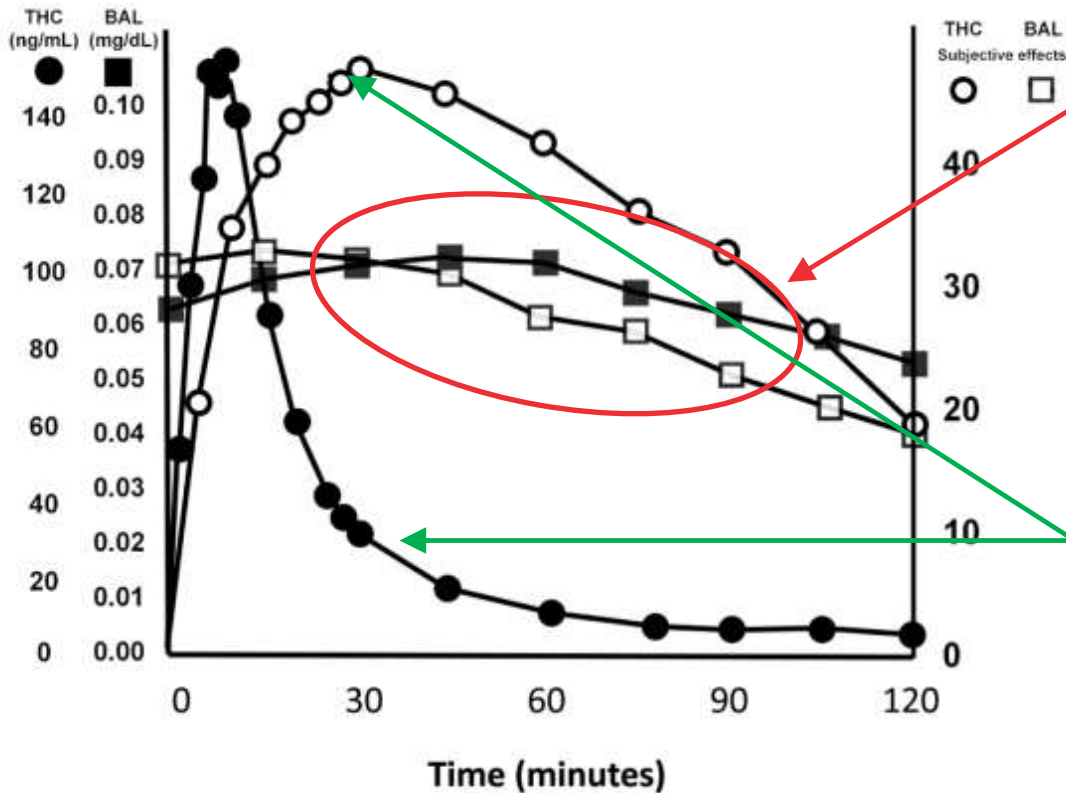
Illegal Everywhere, but What Makes You High?



- Under the Influence
- Per Se
- Incapacitated

RI: 'Zero Tolerance (Medical Exception).' Rest of NE: 'Incapable of Driving Safely.'

Blood Levels vs. Intoxication



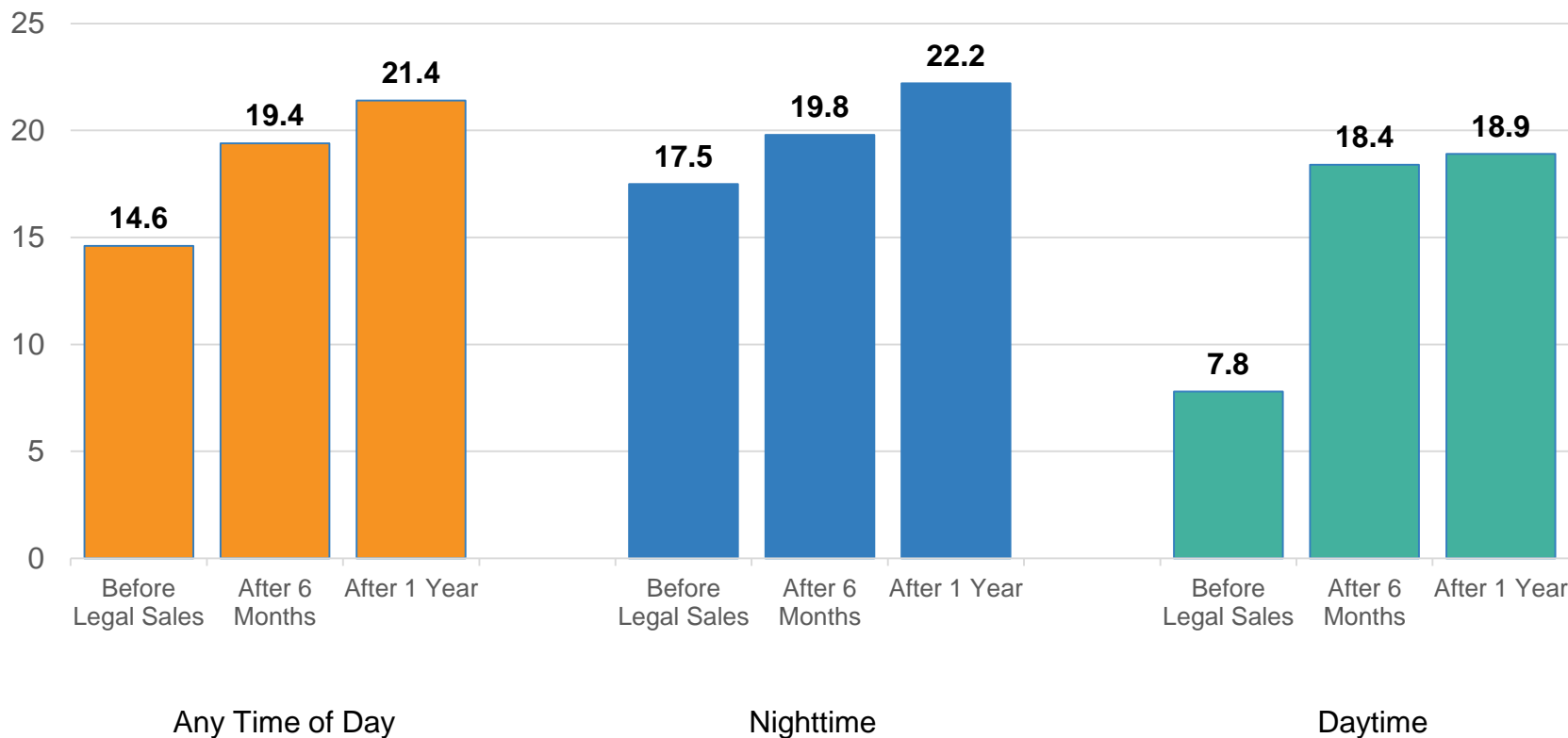
BAC and 'feeling drunk' rise and fall in lockstep

THC levels in blood and 'feeling high' rise and fall at different rates

It Is Difficult to Use Blood Test to Measure Whether Someone is High.

THC on the Road

% THC-Positive Drivers (WA)



Legalization Put More Drivers With THC in Their System on the Road.



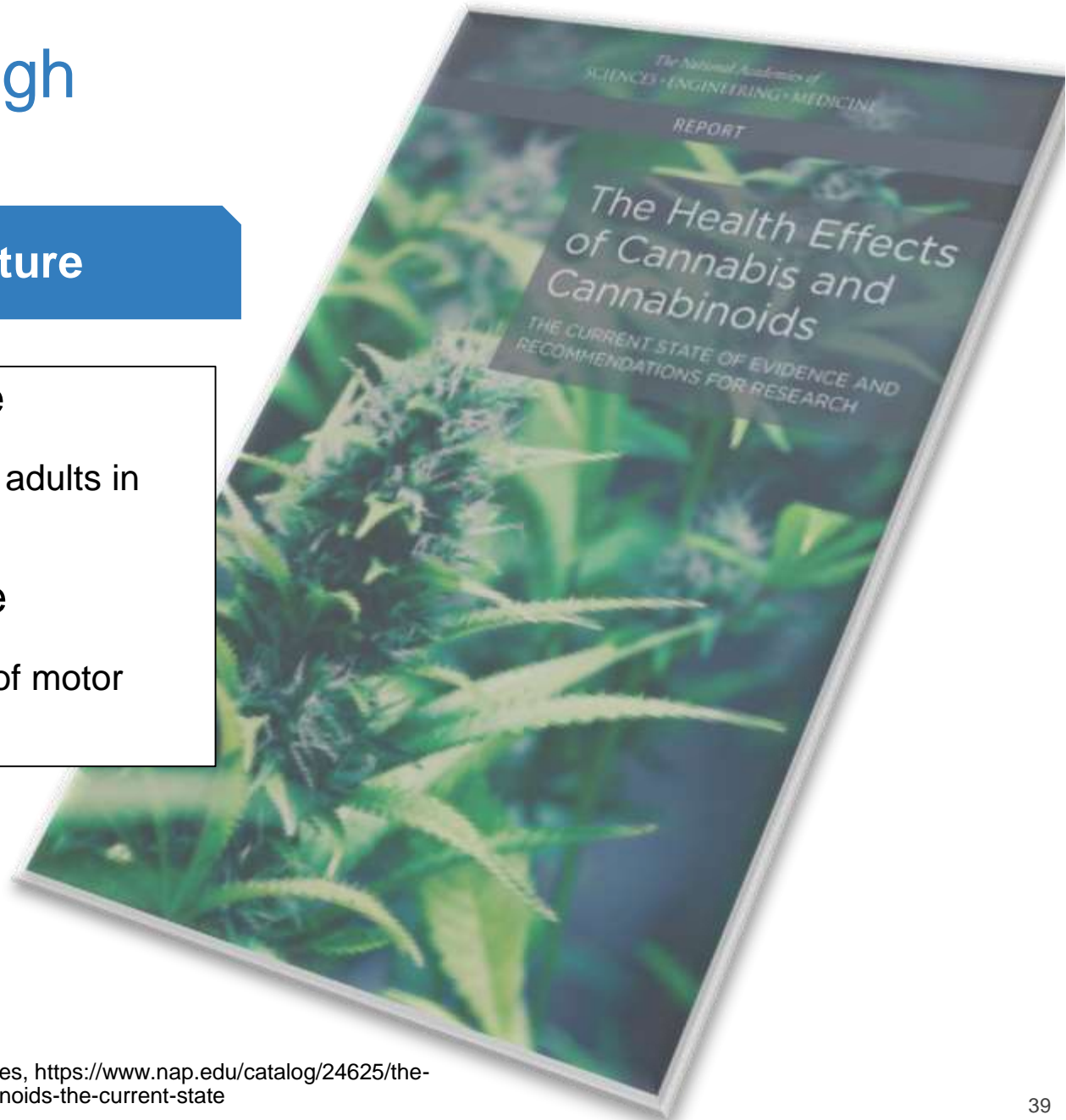
SOURCE: National Highway Traffic Safety Administration.

Driving While High

The Science

Review of Literature

- ▲ Conclusive evidence
 - ▲ Improves the lot of adults in chronic pain.
- ▲ Substantial evidence
 - ▲ Increases the risk of motor vehicle crashes.



SOURCE: National Academy of Sciences, <https://www.nap.edu/catalog/24625/the-health-effects-of-cannabis-and-cannabinoids-the-current-state>

Marijuana and Driving Skills

What the Studies Say

Cognitive Studies

- ▲ 'Impairment in every performance area that can reasonably be connected with safe driving'

Culpability Studies

- ▲ Suffer from
 - ◆ Sampling delay
 - ◆ Reliance on carboxy-THC

Experimental Research

- ▲ 'Marijuana users tend to overestimate their impairment, and consequently employ compensatory strategies.'

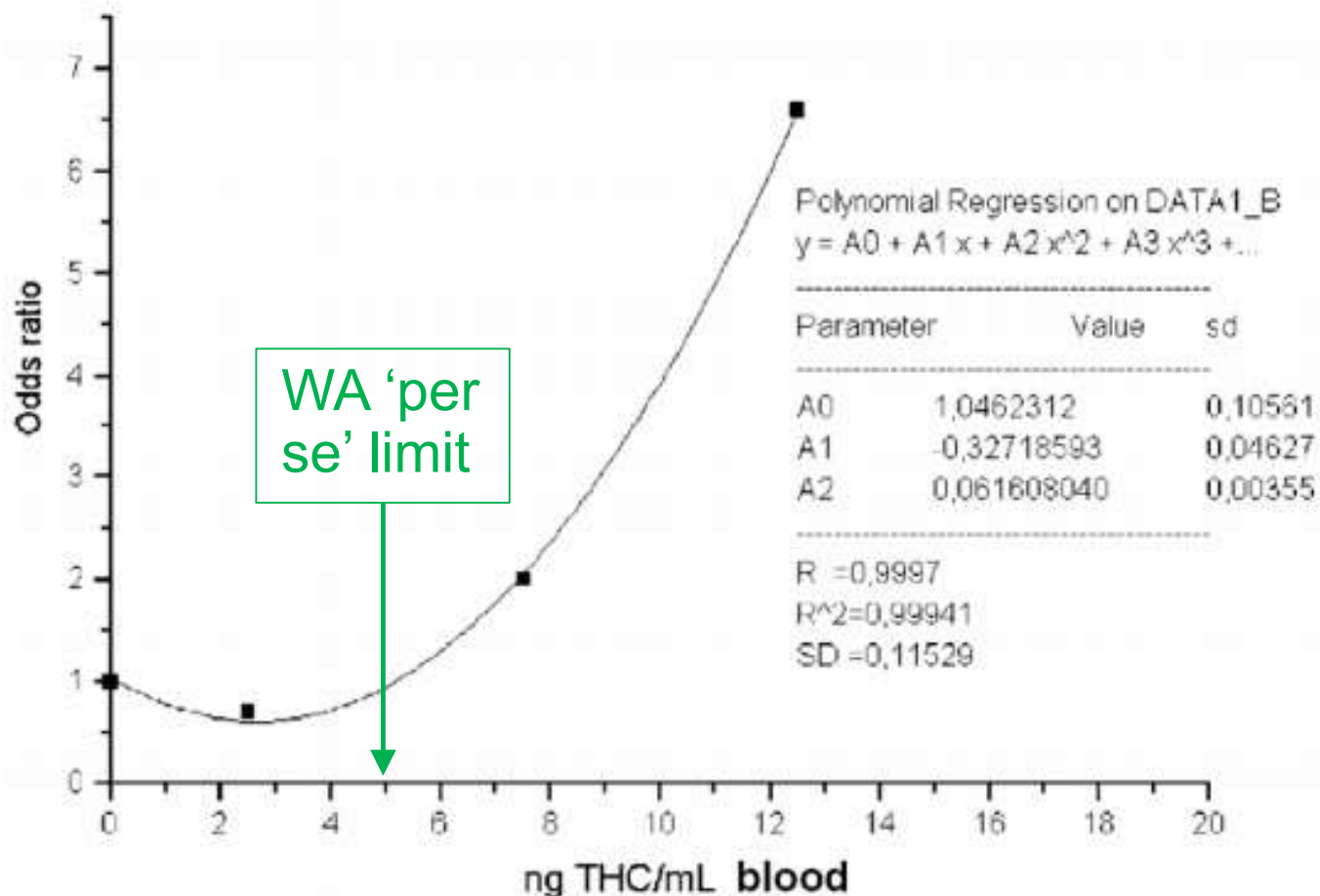
Case Control Studies

- ▲ Hard to create a good control group (accidents that didn't happen)



SOURCE: Sewell, Poling, Sofuoglu, "The Effect of Cannabis Compared with Alcohol on Driving," American Journal on Addictions, 2009.

Accident Probability



Chance of Accident Rises Sharply As Consumption Rises.

But Blood Tests Aren't Perfect

Blood Test vs. Drug Recognition Experts (DREs)

THC Concentration (ng/mL)	Sensitivity ("Catches the Bad Guys")	Specificity ("Frees the Good Guys")	Overall Accuracy ("Gets It Right")
1	80.4%	70.2%	77.0%
2	72.3	75.2	73.3
3	60.1	78.0	66.1
5	39.7	84.2	54.8
7	29.7	89.9	50.0
10	14.1	95.0	41.5



SOURCE: AAA Foundation, An Evaluation of Data from Drivers Arrested for Driving Under the Influence in Relation to Per se Limits for Cannabis, March 2016.

Marijuana + Alcohol

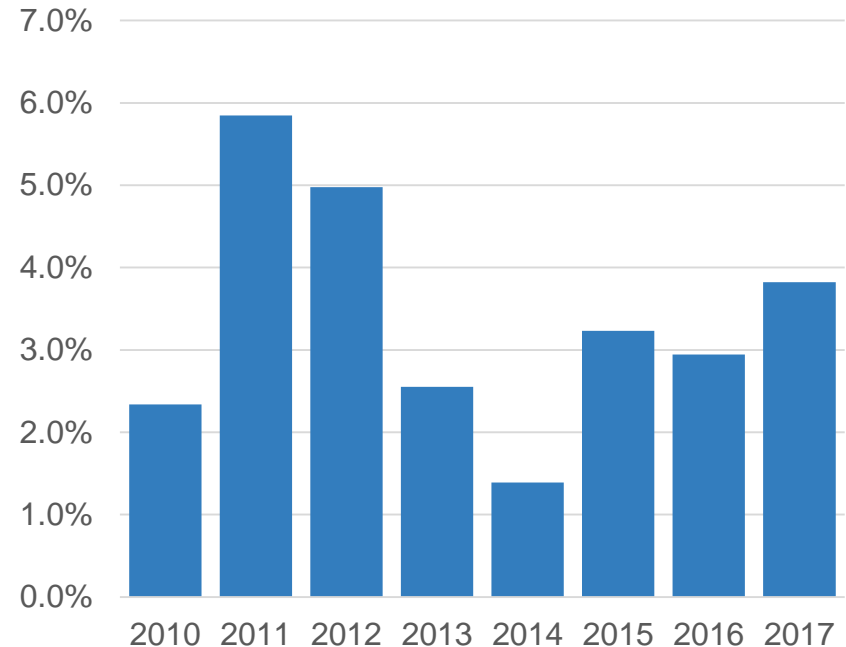
A Killer Combination

Studies Agree

- ▲ Cannabis Hurts Automatic Functions (Lane Usage) More Than Complex Tasks
- ▲ Alcohol Does the Opposite
- ▲ Cannabis Users Become Less Daring
- ▲ Alcohol Users Become More Daring

Cannabis Doesn't Supplant Drinking

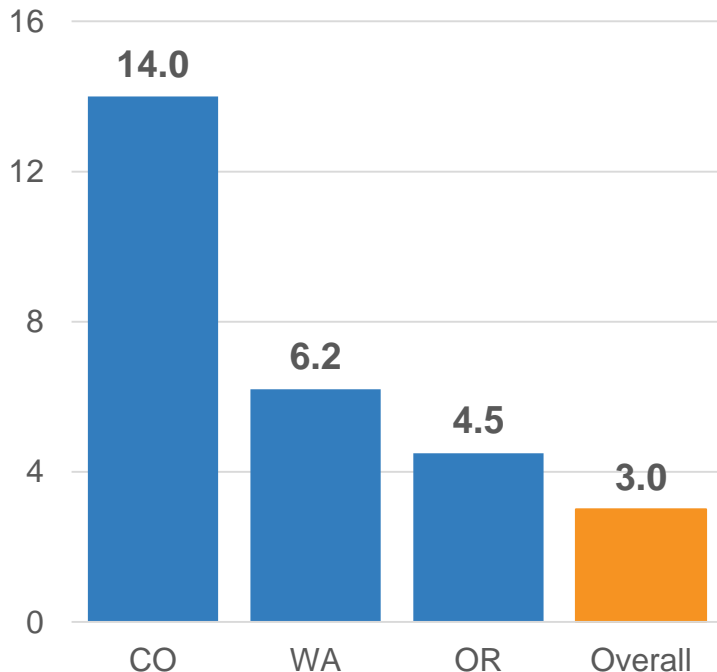
Liquor Tax Collection, % Change from Year Earlier



SOURCES: Colorado Department of Revenue. (Data for first 10 months of year to allow like-to-like comparisons.)

Legal Sales Lead to More Accidents

Percent Change in Collision Frequency,
2012-2016*



* Vs. Neighboring States.

- ▲ Look at 'Real World' Crashes
- ▲ All Measures Statistically Significant
- ▲ 'Overall' Measure a Good Proxy for What Will Happen in Any State



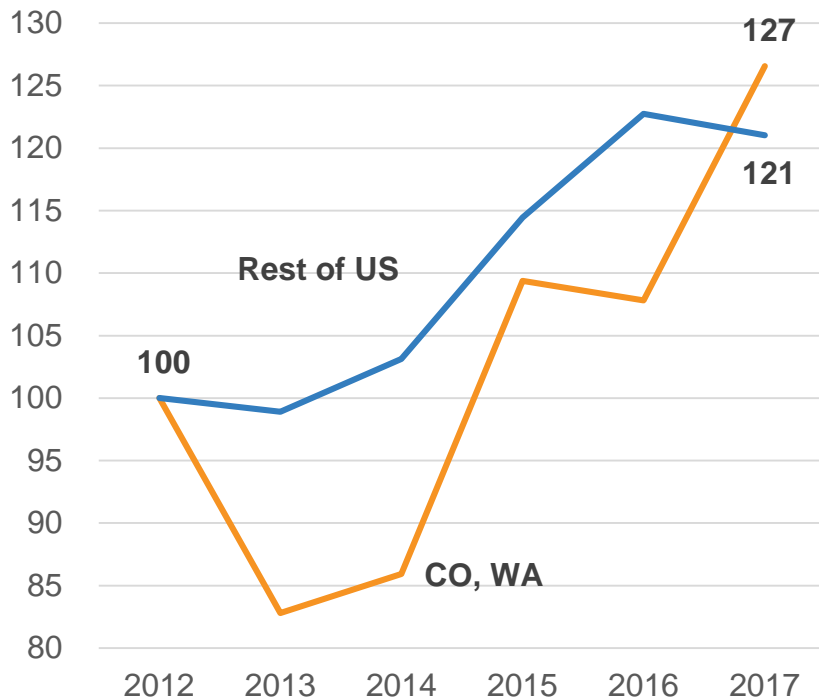
SOURCE: Highway Loss Data Institute.

Pedestrian Deaths and Cannabis

Walking While High?

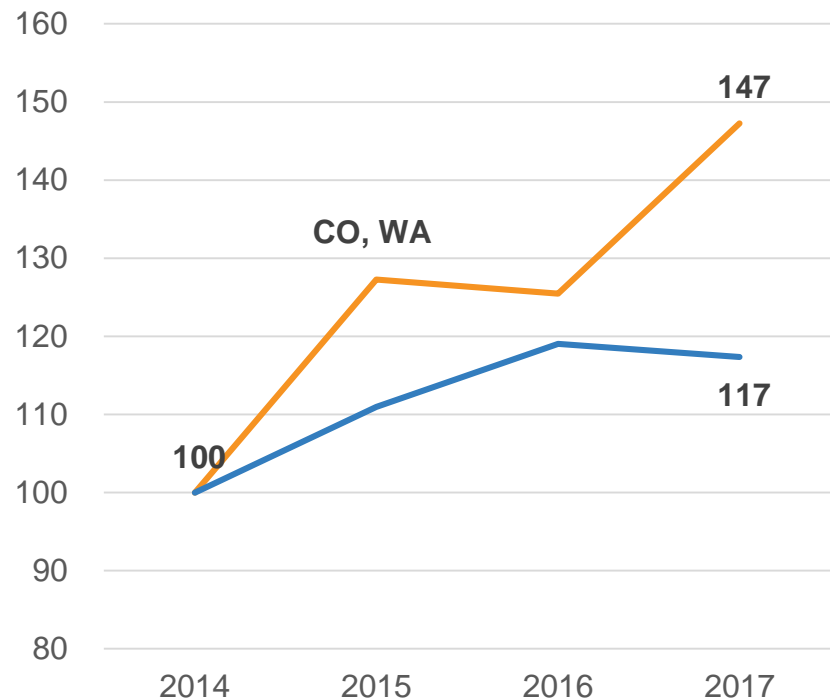
From Date of Legalization

Pedestrian Deaths (2012 = 100)



From Date of Legal Sale

Pedestrian Deaths (2014 = 100)

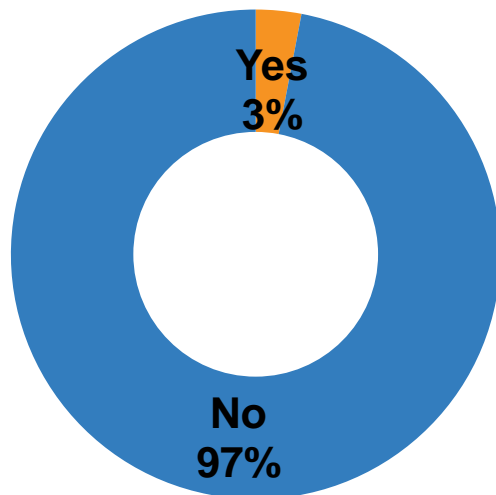


First six months of year.

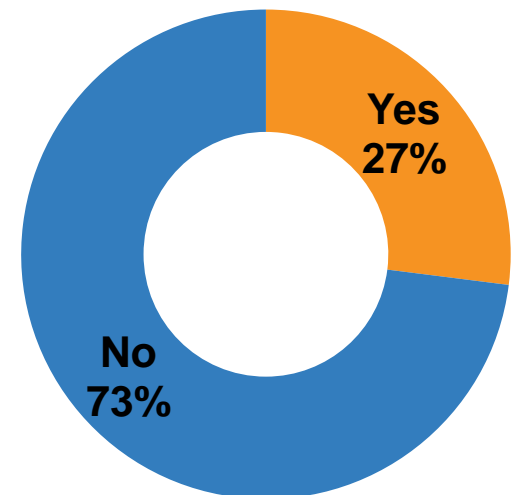
SOURCE: Governors State Highway Association

I.I.I. Survey: Cannabis vs. Alcohol

Would You Ride With a Driver Who Drank Too Much?



Would You Ride With a Driver Who Was High?



Respondents Seem Much More Tolerant of High Driver, Even Though They Understand the Risk.



SOURCE: Insurance Information Institute Pulse survey, November 2017.

Summary

- ▲ Catastrophes Led to a Weak Underwriting Result in 2017 – but Capital Gains Helped Overall Results.
- ▲ Rates Are Flat Overall, With Variability by Line of Business.
- ▲ Evidence is Weak That Hard Market Will Emerge This Year.
- ▲ With Marijuana and Driving, We Need
 - ◆ Greater Awareness
 - ◆ More Research
 - ◆ Understanding of Greater Costs (Training and Testing)



The Insurance Information Institute

Improving public understanding
of insurance...

...what it does and how it works



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