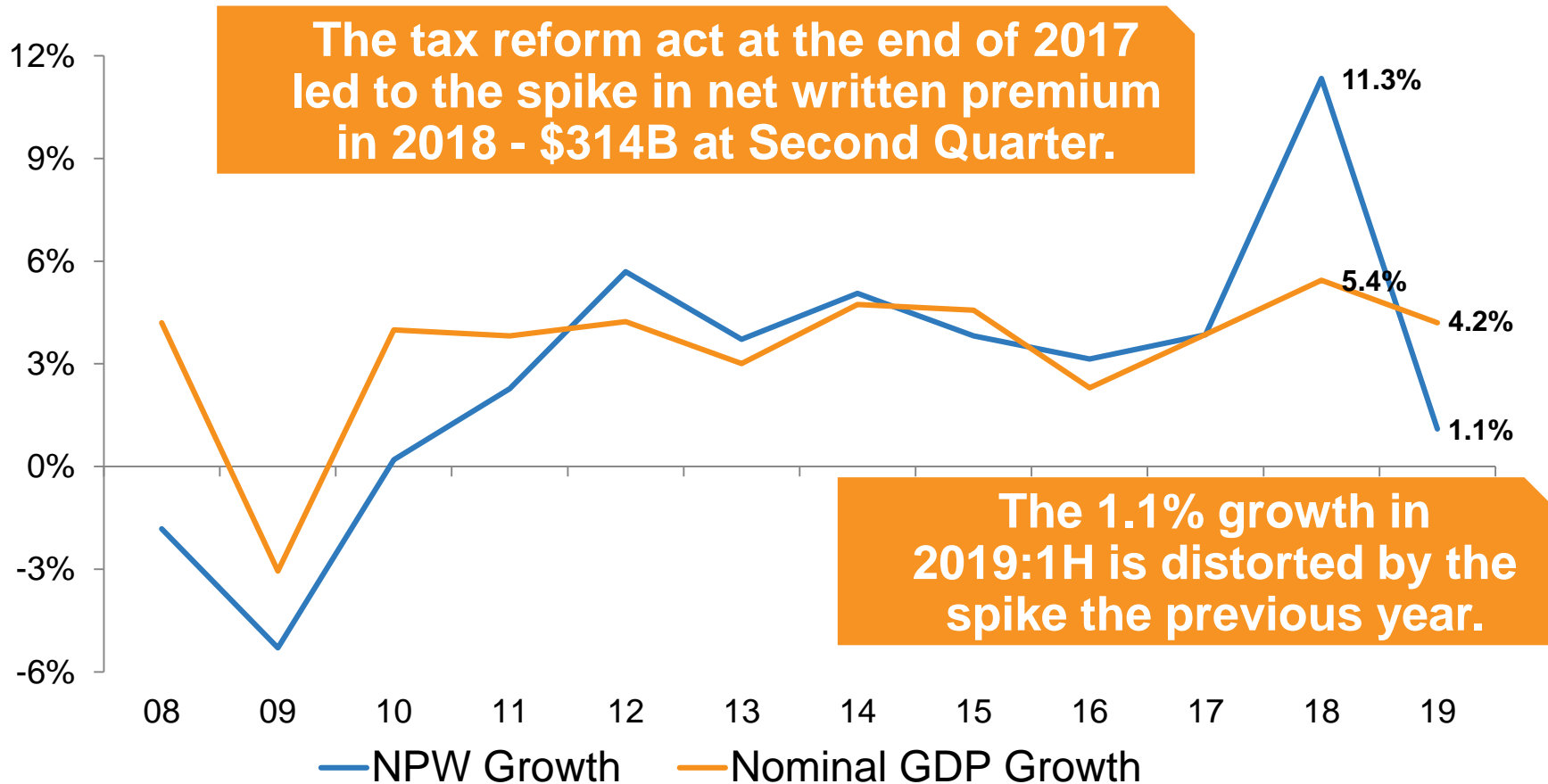


Premium Trends
Claim Trends
Investment Trends
Profitability Trends

So far, 2019 Looks Like a Good Year

Net Premium Written Growth, Annual Change



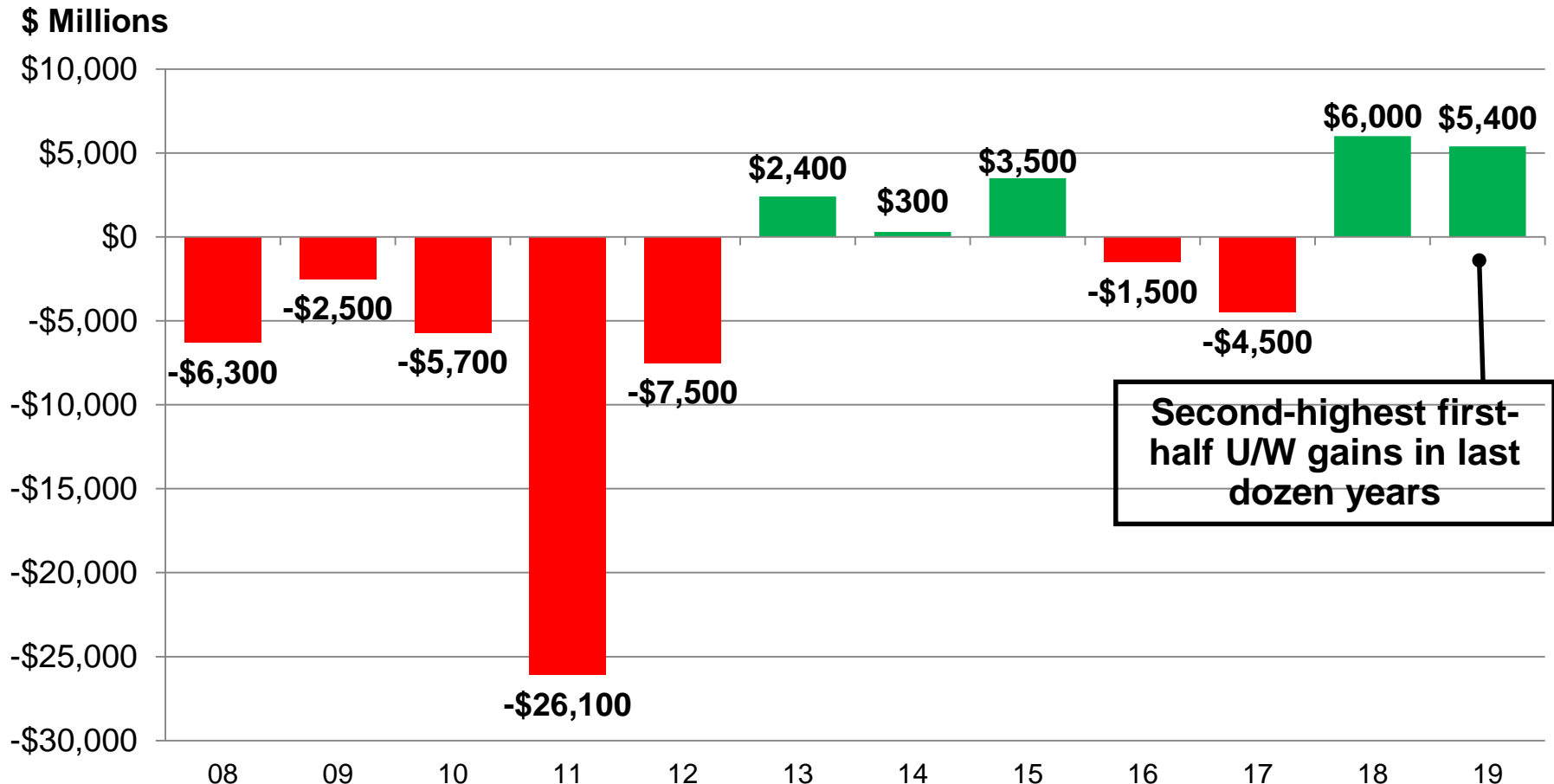
As a general rule, net written premium growth tracks nominal GDP growth.



All data through second quarter.

SOURCES: NAIC data sourced through S&P Global Intelligence, Bureau of Economic Affairs, Insurance Information Institute.

Net Underwriting Gains & Losses, 1st Halves of Each Year, 2008-2019



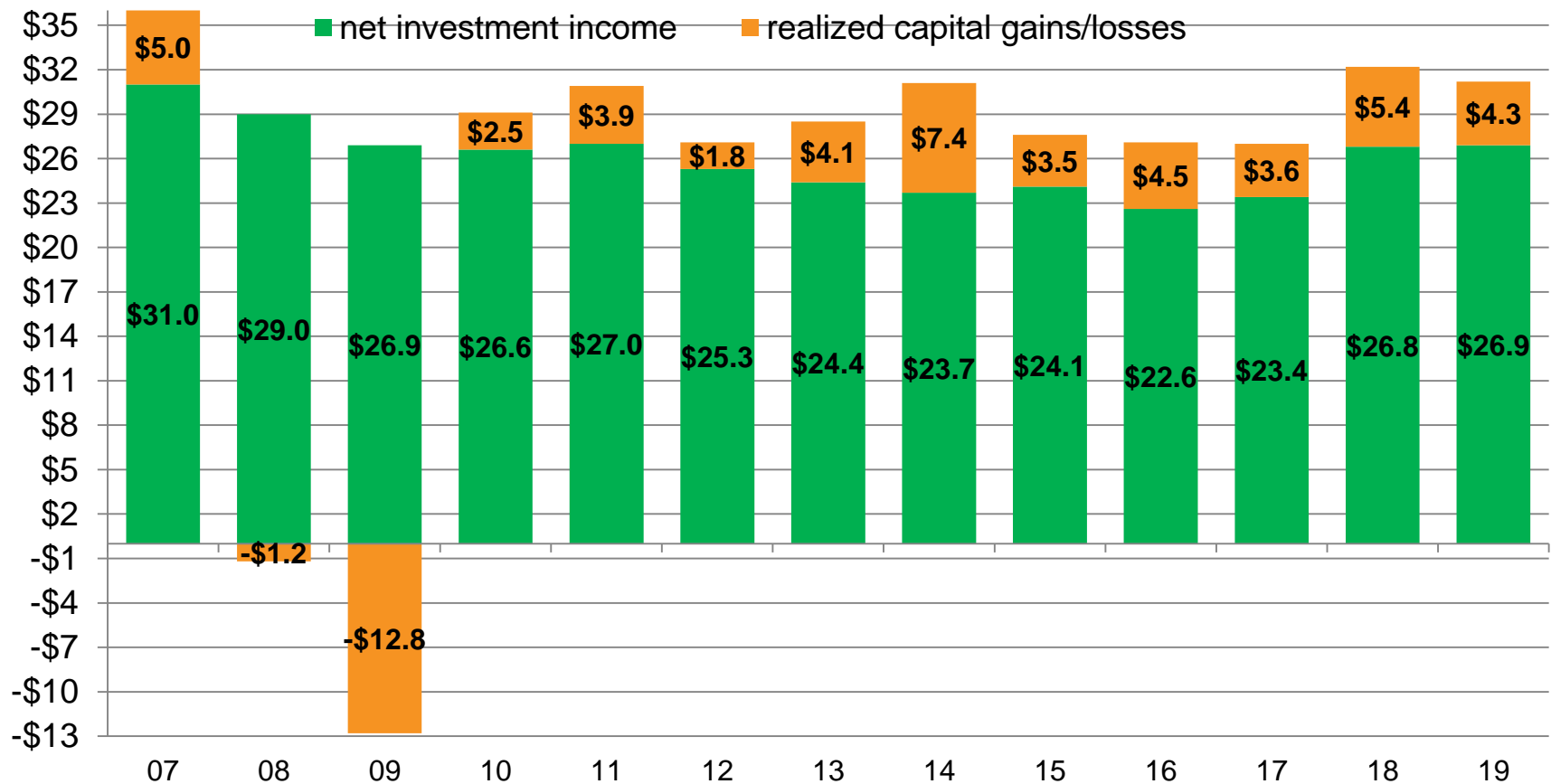
Net underwriting results in the first half of the year have been quite variable, but mostly losses.



Sources: ISO/PCI; Insurance Information Institute.

Net Investment Gains Vary Mainly With Realized Capital Gains/Losses, 1st Halves, 2007-2019

\$ Billions



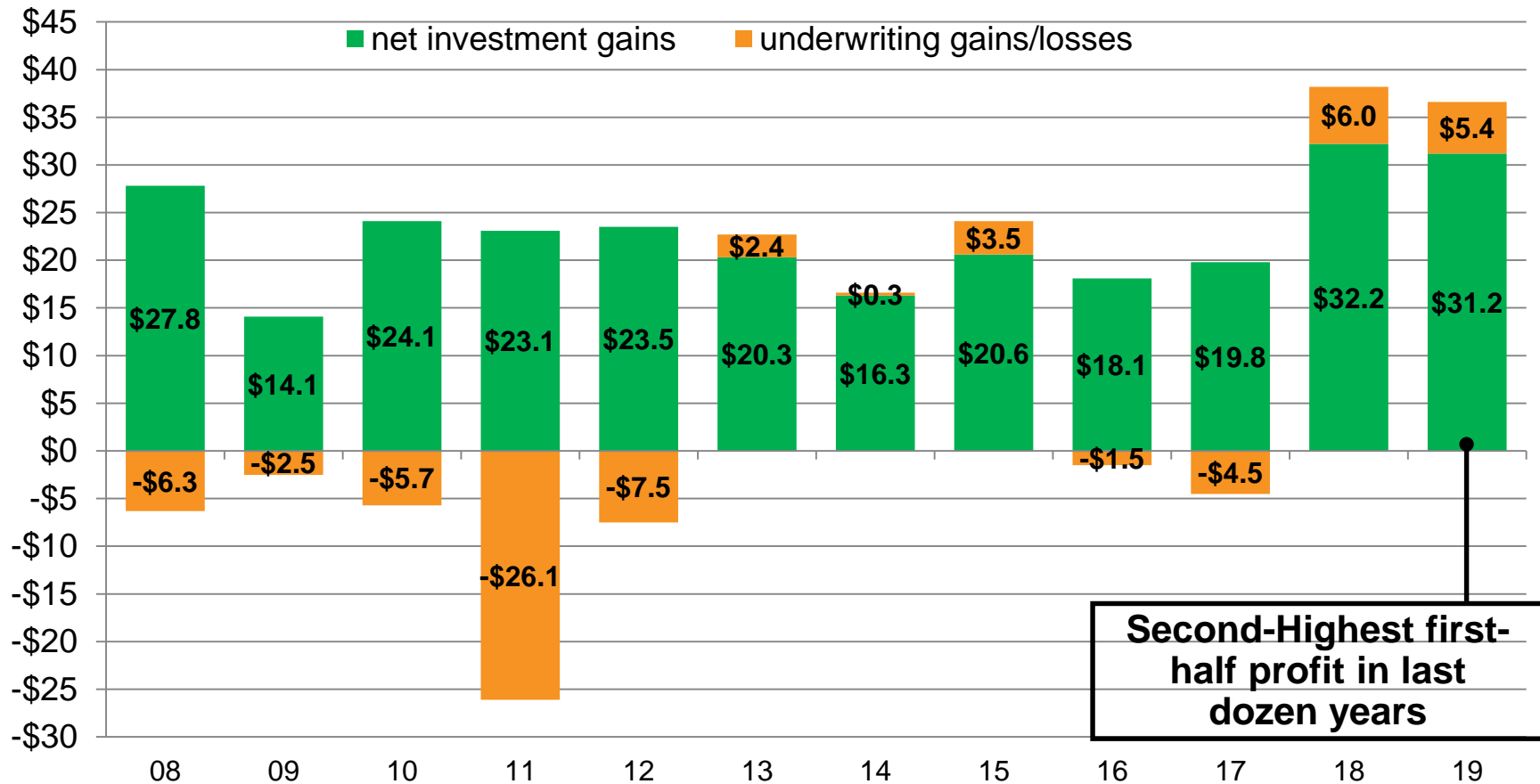
In the first half of the year, net investment income has been steady but realized capital gains/losses have been variable.



Sources: ISO/PCI; Insurance Information Institute.

Sources of Profit (before taxes), 1st Halves, 2007-2019

\$ Billions



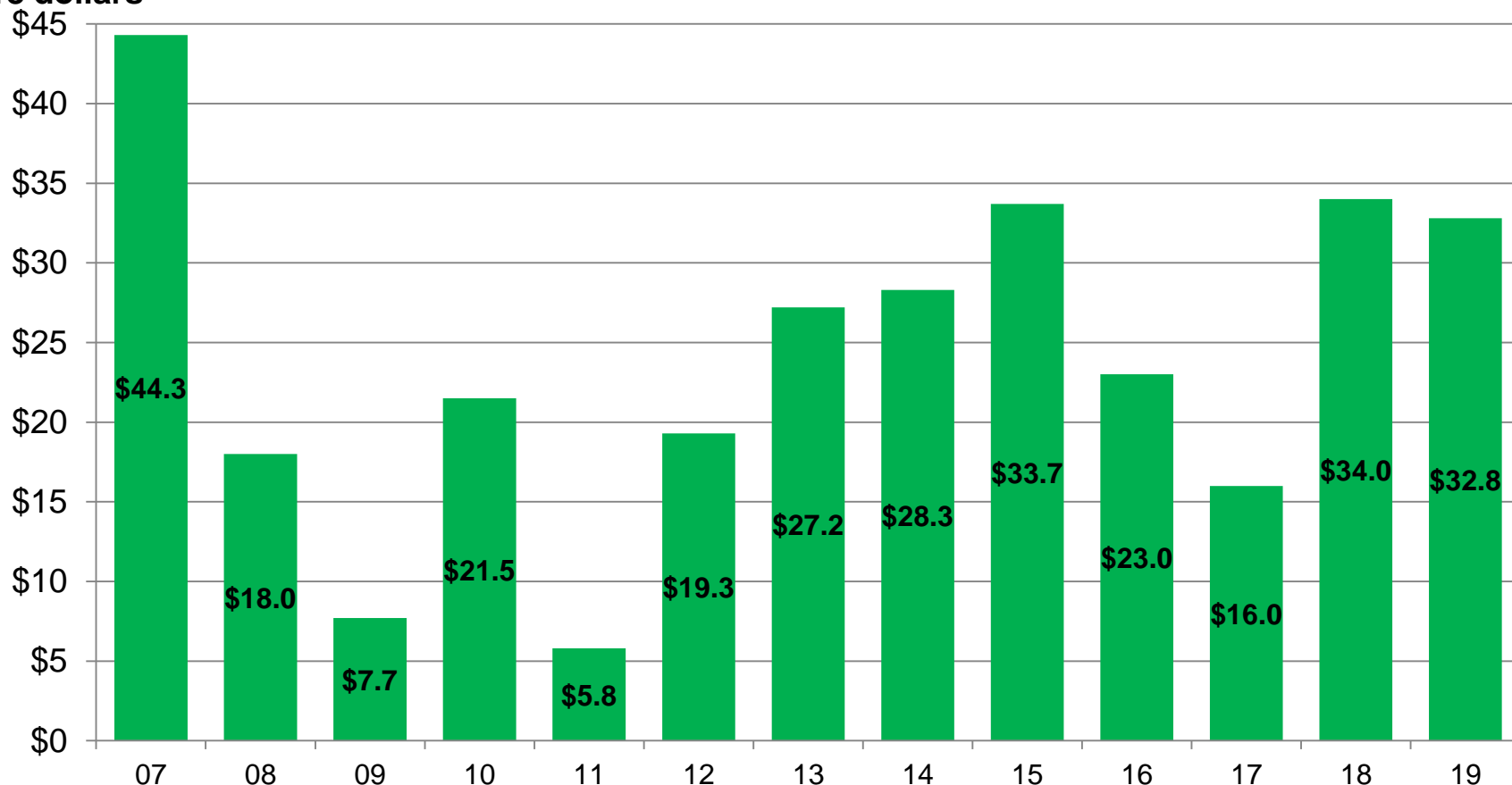
In the first half of 2018 and 2019, net investment gains alone were higher than total profits in prior years.



Sources: ISO/APCIA; Insurance Information Institute.

P/C Industry Net Income After Taxes*, 1st Halves, 2007-2019

\$ Billions,
2018 dollars



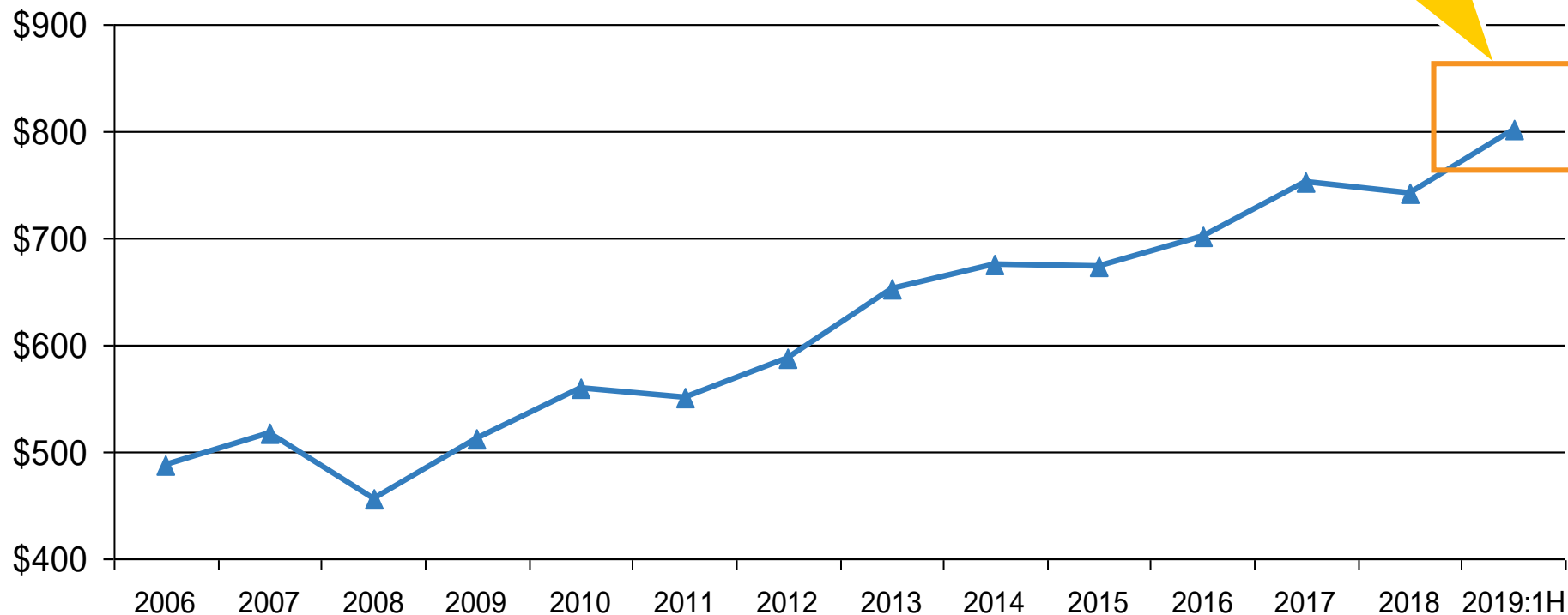
**In the first half of the year, net income varied.
2019 was the third-highest profit in the last dozen years.**



*adjusted for inflation using the BLS CPI calculator, to 2018 dollars
Sources: ISO, a Verisk Analytics company; Insurance Information Institute.

Policyholder Surplus, 2006–2019

(\$ Billions)



The industry now has \$1 of surplus for every \$0.77 of NPW, near the strongest claims-paying status in its history.

The P/C insurance industry is in very strong financial condition.



Sources: ISO, A.M. Best.

Six Insurance Industry Challenges

Severe Weather Trends

The “Protection Gap”

Financial Illiteracy and Innumeracy

Behavioral Economic Biases

“Big Data”

Attracting Top and Diverse Talent

Severe Weather

Storms Coming at “Warp Speed”

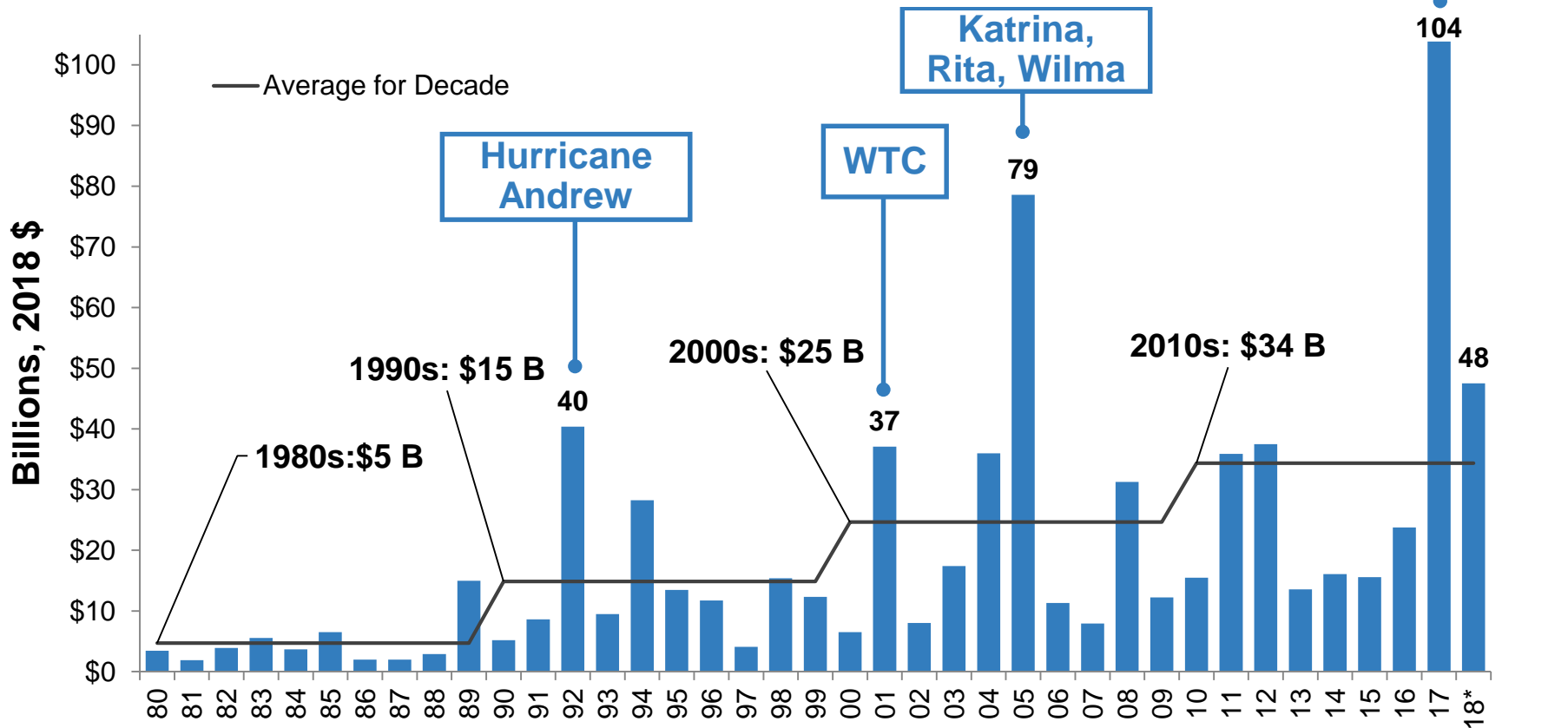
From *The New York Times*

[Hurricane] Imelda ..., which struck two years and two weeks after [Hurricane] Harvey, means Harris County has now suffered one 500-year rainfall event and two 100-year events since 2016.



Source: Christopher Flavelle, “In Houston, A Rash of Storms Tests the Limits of Coping with Climate Change,” *New York Times*, October 2, 2019.

U.S. Inflation-Adjusted Cat Losses



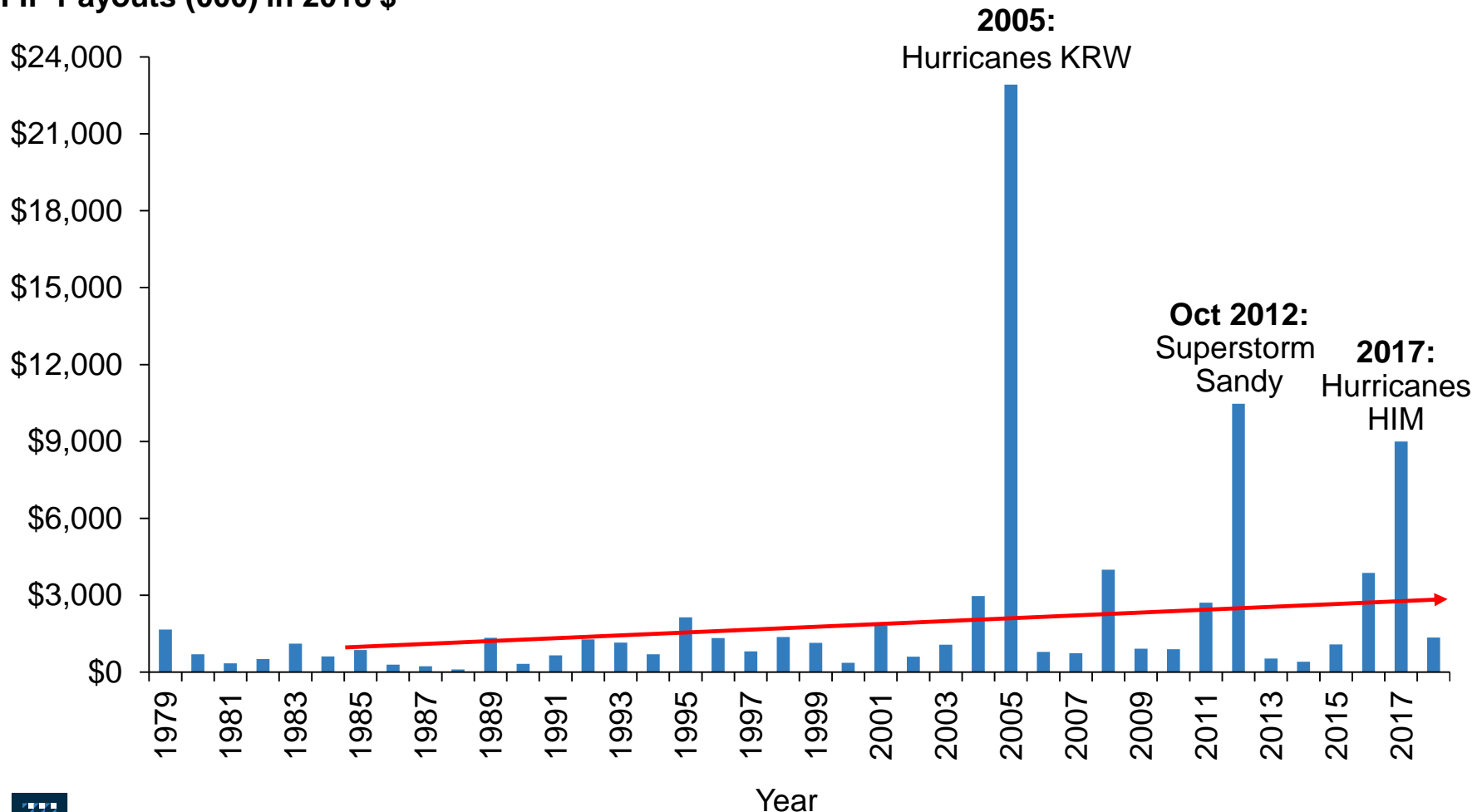
**2018 – Third worst year for U.S. Insured Catastrophe Losses.
Average Insured Loss per Year for 1980-2018 is \$19.3 B.**

*2018: Inflation-adjusted estimate, subject to change. 2010s is average of 2010 to 2018. All losses are Direct.
Sources: Property Claims Service, a Verisk Analytics business; Insurance Information Institute.



Post 2005, NFIP Payouts Have Spiked (to the Few Americans With Flood Insurance)

NFIP Payouts (000) in 2018 \$



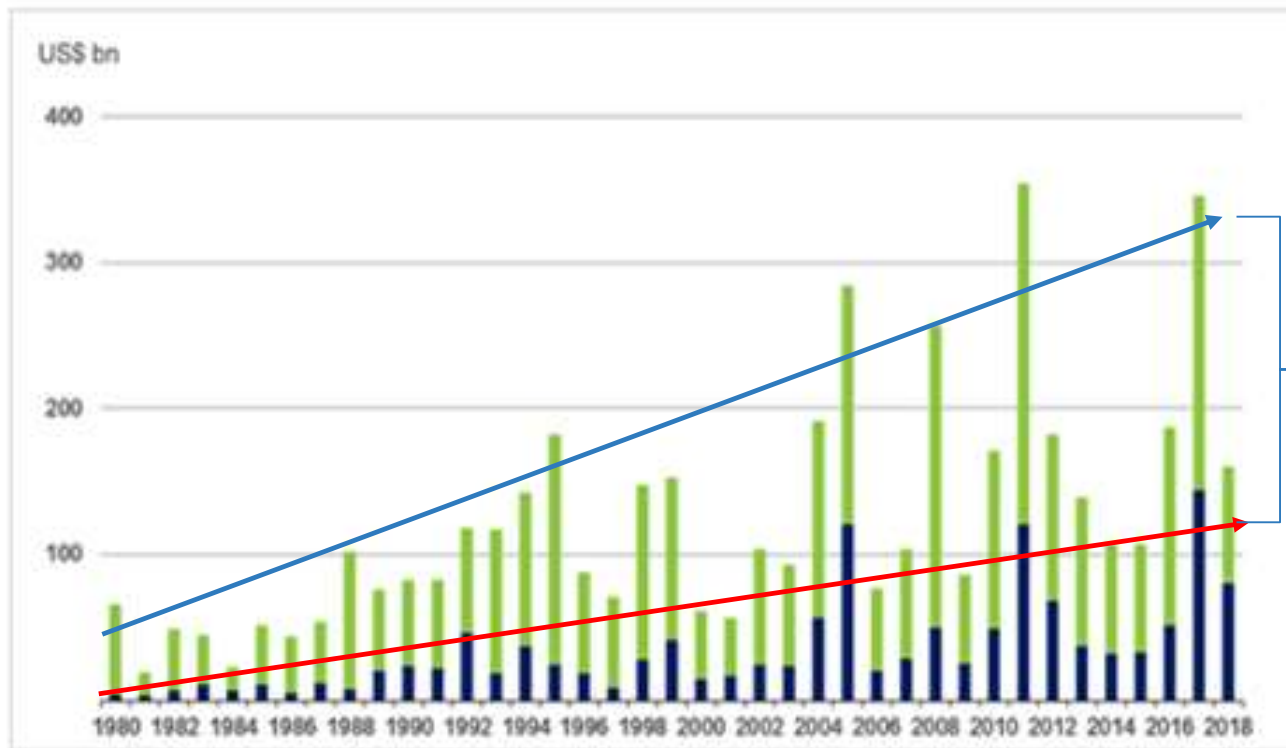
Source: [FEMA NFIP](#)

The “Protection Gap”

It's Getting Worse

The Protection Gap: Total Uninsured Property Losses

World Natural Catastrophes By Insured (Blue) and Overall (Green) Losses, 1980–2018



**The
“Protection
Gap”**

Source: © 2019 Munich Re, Geo Risks Research, NatCatSERVICE. As of March 2019.

Understanding the Concept, and its Flaws

- Broadly, it assumes that the goal is insurance sufficient to cover all losses that are likely to occur
 - Anything less than full loss reimbursement leaves the policyholder undercompensated and unable to fully recover
 - Typically, when this happens, the insurance industry is blamed for the product's failure to restore the policyholder to pre-loss condition

Understanding the Concept, and its Flaws

- Of course, only insuring against trend losses doesn't assure that policyholders will have full (or nearly full) insurance because
 - Future extreme events could be more frequent and/or more violent and cause more damage
 - The graphs ignore flood damage/coverage and all perils not currently insured in the private market. Counting these would make the protection gap wider (and tougher to close).

Understanding the Concept, and its Flaws

- Even with it's flaws, the concept has merit. If we shrink the Protection Gap,
 - More insureds would recover more quickly and more fully from natural disasters
 - People would have a more favorable (or less hostile) view of insurance
 - Insurers' premium income would rise and stay higher

Insurers Aim to Fill In the Disaster Gap

As natural disasters increase, homeowners look for more ways to cover more expenses

One of a homeowner's worst **nightmares** is learning that major **expenses** resulting from a natural disaster **aren't covered** by their insurance policy.

As hurricanes, wildfires and other natural disasters have **increased** in recent years, so has **marketing** of insurance products designed to **offer policyholders more coverage** than typical homeowners policies give.



Catastrophic parametric insurance is increasingly being marketed in areas with natural disasters and fires such as the Camp Fire in Paradise, Calif., in 2018. PHOTO: HECTOR AMEZCUA/SACRAMENTO BEE/ZUMA PRESS

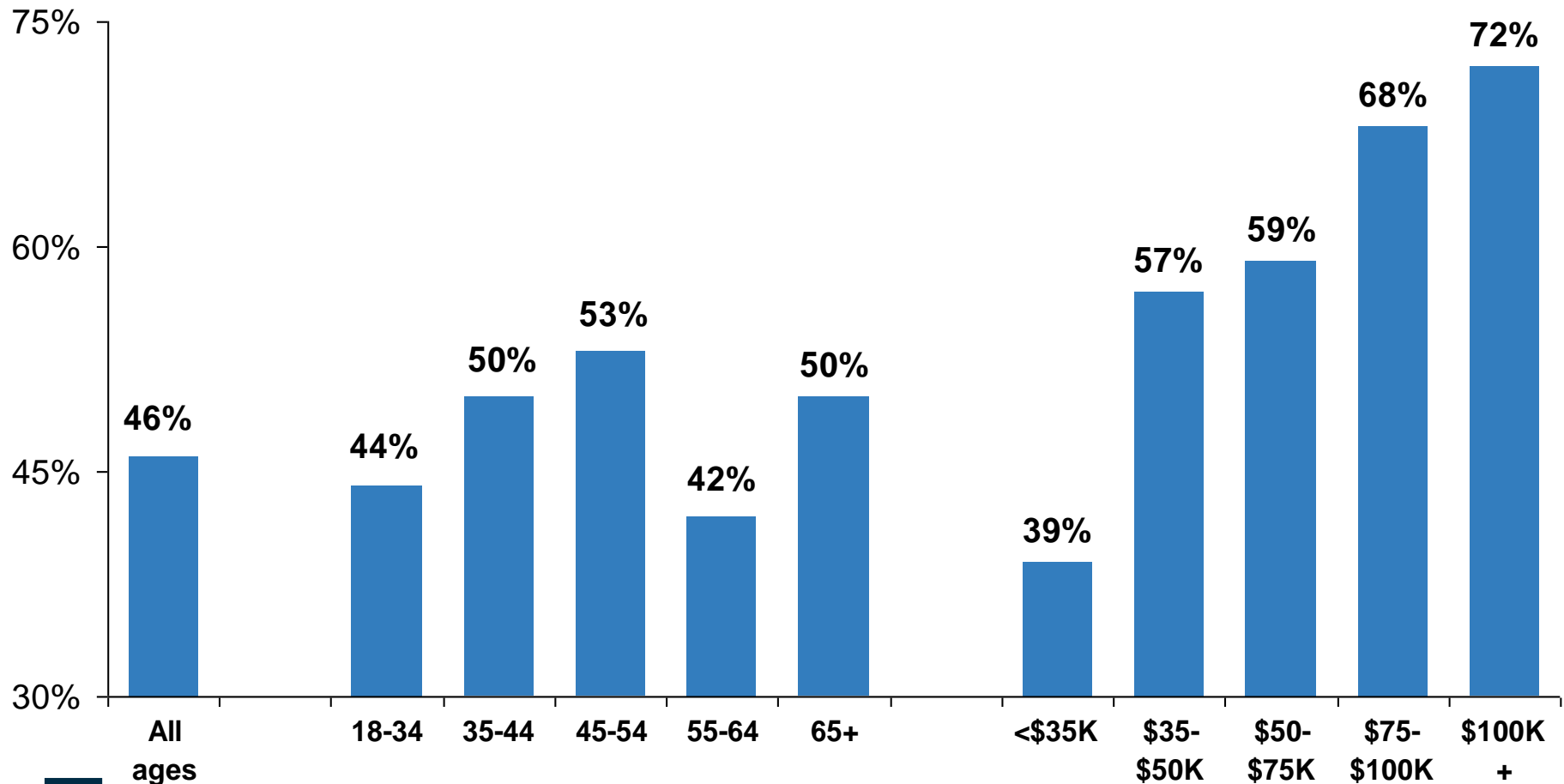
One type of policy consumers are seeing more of is **catastrophic parametric insurance**. Unlike traditional indemnity benefits, parametric policies pay a predetermined amount of money when a trigger is met—such as a named storm, certain wind speeds, geological readings, waterlines, flood depths, or burned acreage.



Source: Lisa Ward, "Insurers Aim to Fill In the Disaster Gap," *Wall Street Journal*, Oct. 21, 2019

Many Renters Have a Large Protection Gap (Because They Have No Renters Insurance At All)

Percent of Renters Who
Have Renters Insurance



Source: I.I.I. public opinion poll taken November 8-11, 2018

Financial Illiteracy and Innumeracy

(Nobody Understands Insurance
or anything else financial)

Financial Literacy: A 3-Question Test

This test has been administered world-wide to provide a rough indicator of financial literacy among many populations.

The First Financial Literacy Question

If you had \$100 in a savings account with an interest rate of 2 percent per year, after 5 years, how much do you think you would have in the account if you left the money to grow?

- a. More than \$102
- b. Exactly \$102
- c. Less than \$102
- d. Don't know
- e. Refuse to answer

The Second Financial Literacy Question

If the interest rate on your savings account was 1 percent per year and inflation was 2 percent per year, after 1 year with the money in this account would you be able to buy

- a. More than today
- b. Exactly the same as today
- c. Less than today
- d. Don't know
- e. Refuse to answer

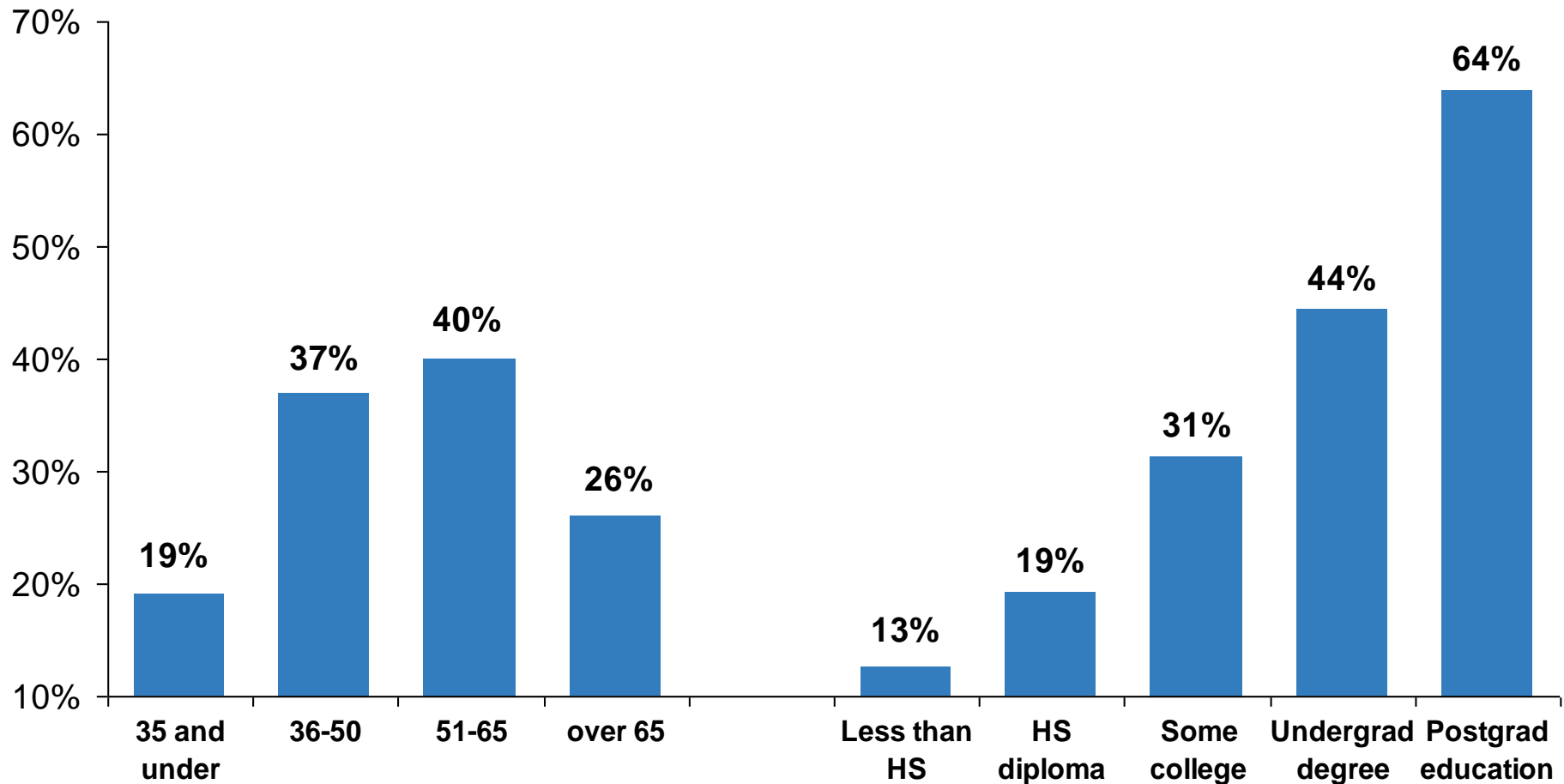
The Third Financial Literacy Question

“Buying a single company stock usually provides a safer return than a stock mutual fund.” This statement is

- a. True
- b. False
- c. Don't know
- d. Refuse to answer

Financial Literacy by Age Group and Education

Percent answering all three questions correctly



*The questions ask about interest rates, inflation, and risk diversification (comparing individual stocks vs. stock mutual funds). The details are on page 10 of the cited article and in other articles cited by the authors.



Source: Lusardi and Mitchell, "The Economic Importance of Financial Literacy: Theory and Evidence," *Journal of Economic Literature*, 2014 (pp. 5-44).

Why Is This Important?

To make good decisions regarding the types and amounts of P/C insurance to buy, consumers should understand

- The types of losses/claims that they might sustain
- The likelihood/probability of those various kinds of losses/claims—what we call “frequency”
- The potential severity of those losses

Behavioral Economic Biases:

Why Don't People Buy Insurance
or Take Protective Measures?

Decision-making is generally poor when dealing with problems that are

- ◆ Unfamiliar
- ◆ Complex
- ◆ In the future

And we often use instinct instead of reason.



6 Biases That Lead to Bad Insurance Decisions

- ▲ Myopia – focusing on immediate costs (premiums, preventive measures) and ignoring future benefits
- ▲ Amnesia – forgetting past disasters
- ▲ Optimism – “it won’t happen to me”
- ▲ Inertia – tendency to not act in the face of uncertainty
- ▲ Simplification – tendency to focus on a subset rather than all relevant factors
- ▲ Herding – tendency to do what others are doing



“Big Data”

“Big Data” Definition

Data that contains greater **variety** arriving in increasing **volumes** and with ever-higher **velocity** (the three Vs).

Big data is

- ▲ larger, more complex data sets, especially from new data sources.
- ▲ These data sets are so voluminous that traditional data processing software just can't manage them.
- ▲ These massive volumes of data can be used to address business problems you wouldn't have been able to tackle before.



Some tough challenges involving Big Data

- ▲ Maintaining Compliance with a plethora of laws and regulations.
 - ◆ All 50 states have some sort of data protection regulation, with the strictest data laws in California and Vermont.
 - ◆ It is vital that insurers utilize a data system that is flexible and scalable, so they can stay in compliance as laws and regulations continue to change over time.
- ▲ Convincing regulators that new rating variables, from Big Data, are acceptable

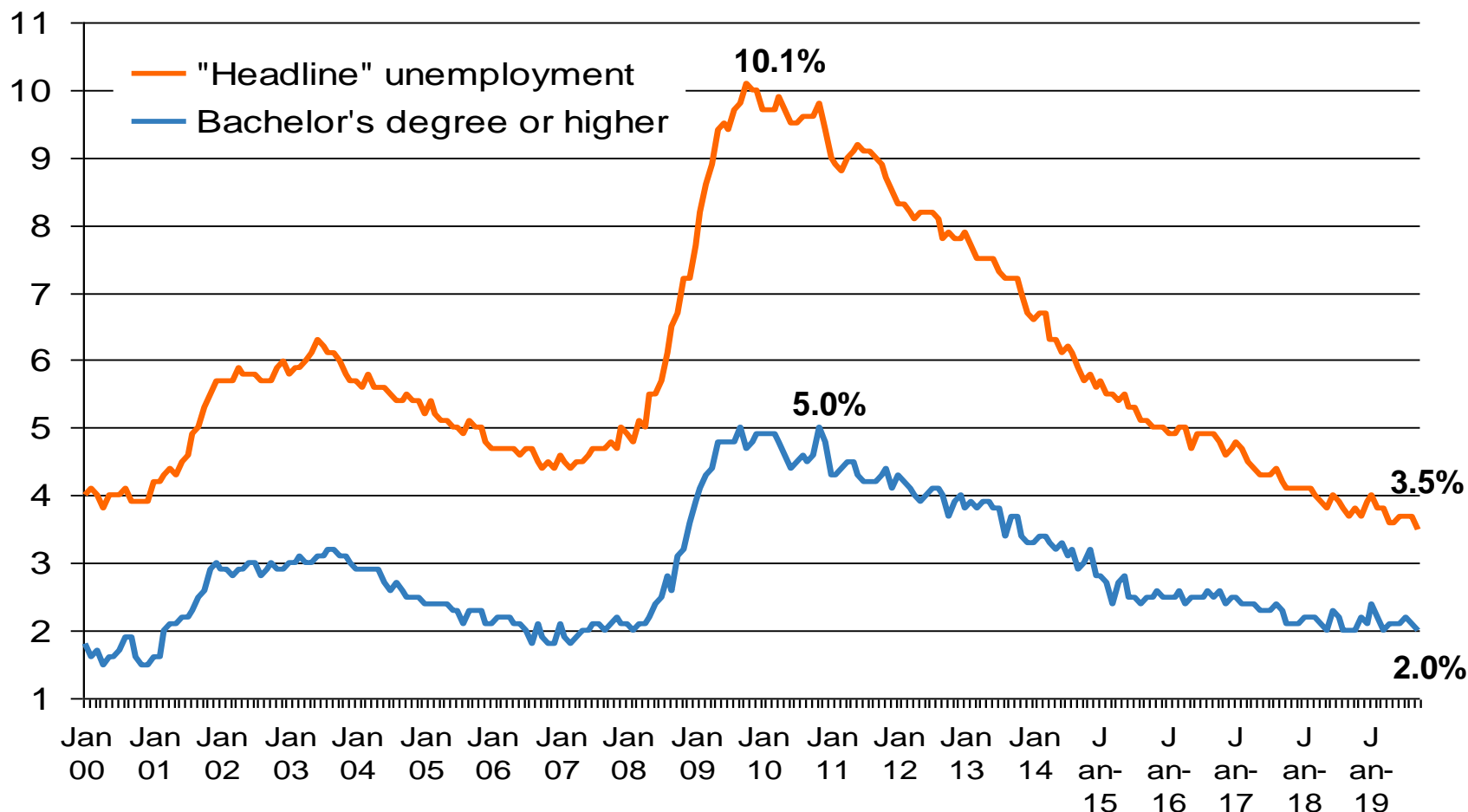


Attracting Top and Diverse Talent:

It's Going to be Tougher than Ever

Unemployment Rates, Bachelor's Degree vs. All

January 2000 through Sept. 2019
Seasonally Adjusted (%)

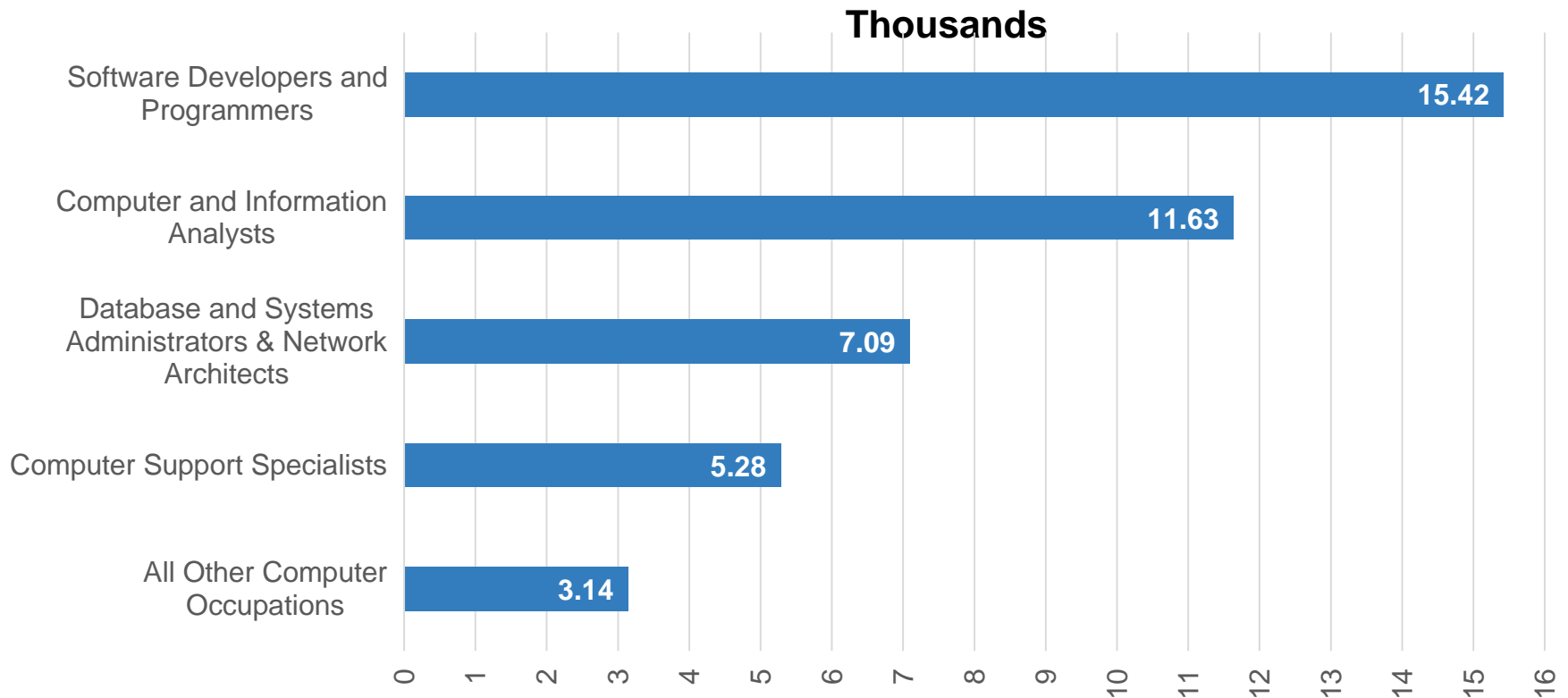


Even in the worst of the “Great Recession,” the unemployment rate for people with a Bachelor’s degree or higher never rose above 5%.



Sources: US Bureau of Labor Statistics; Insurance Information Institute.

Over 42,000 Employed in Computer Occupations at P/C Insurance Carriers

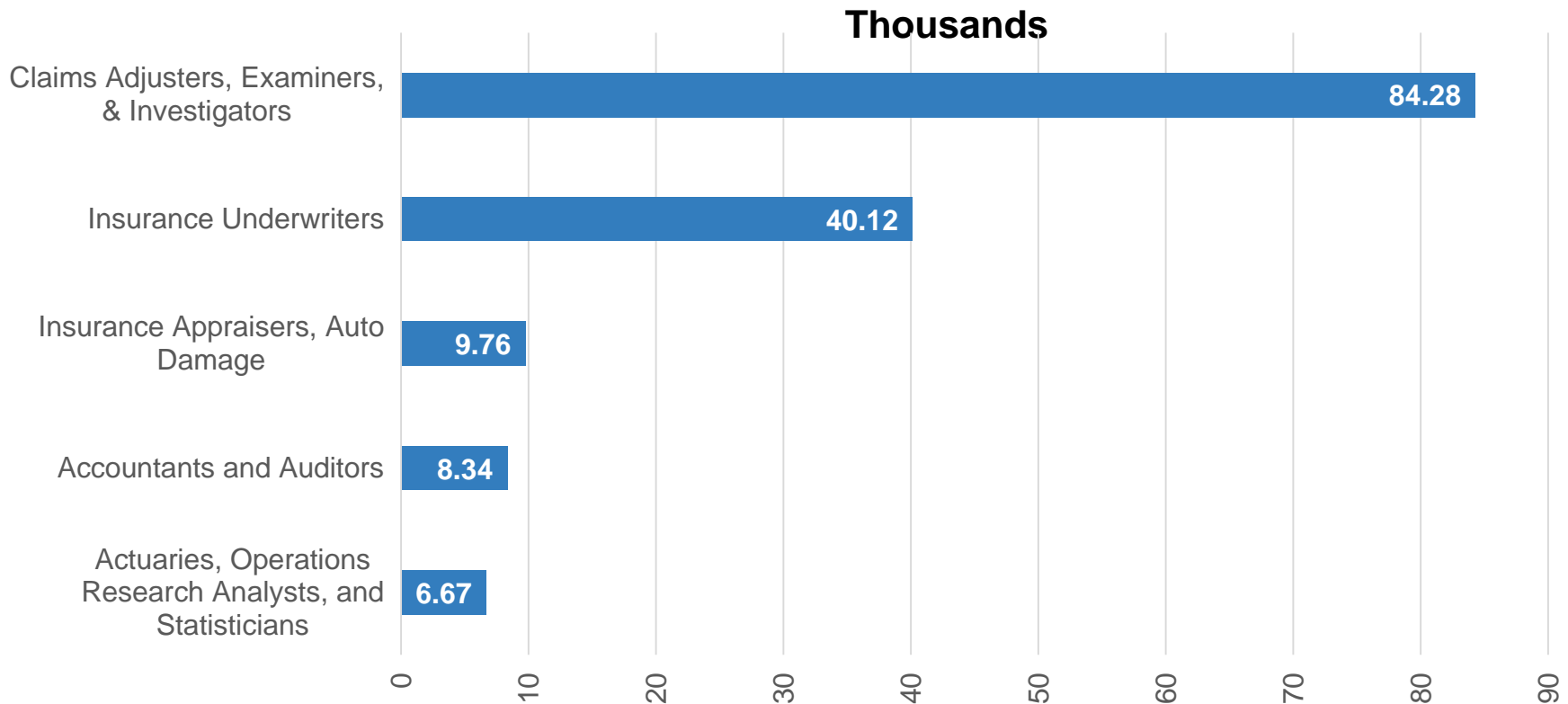


Virtually every aspect of insurance activity now involves computers in some way, so these totals can be expected to grow.



Sources: Bureau of Labor Statistics; I.I.I.

Over 150,000 Employed in Traditional Insurance Occupations at P/C Carriers



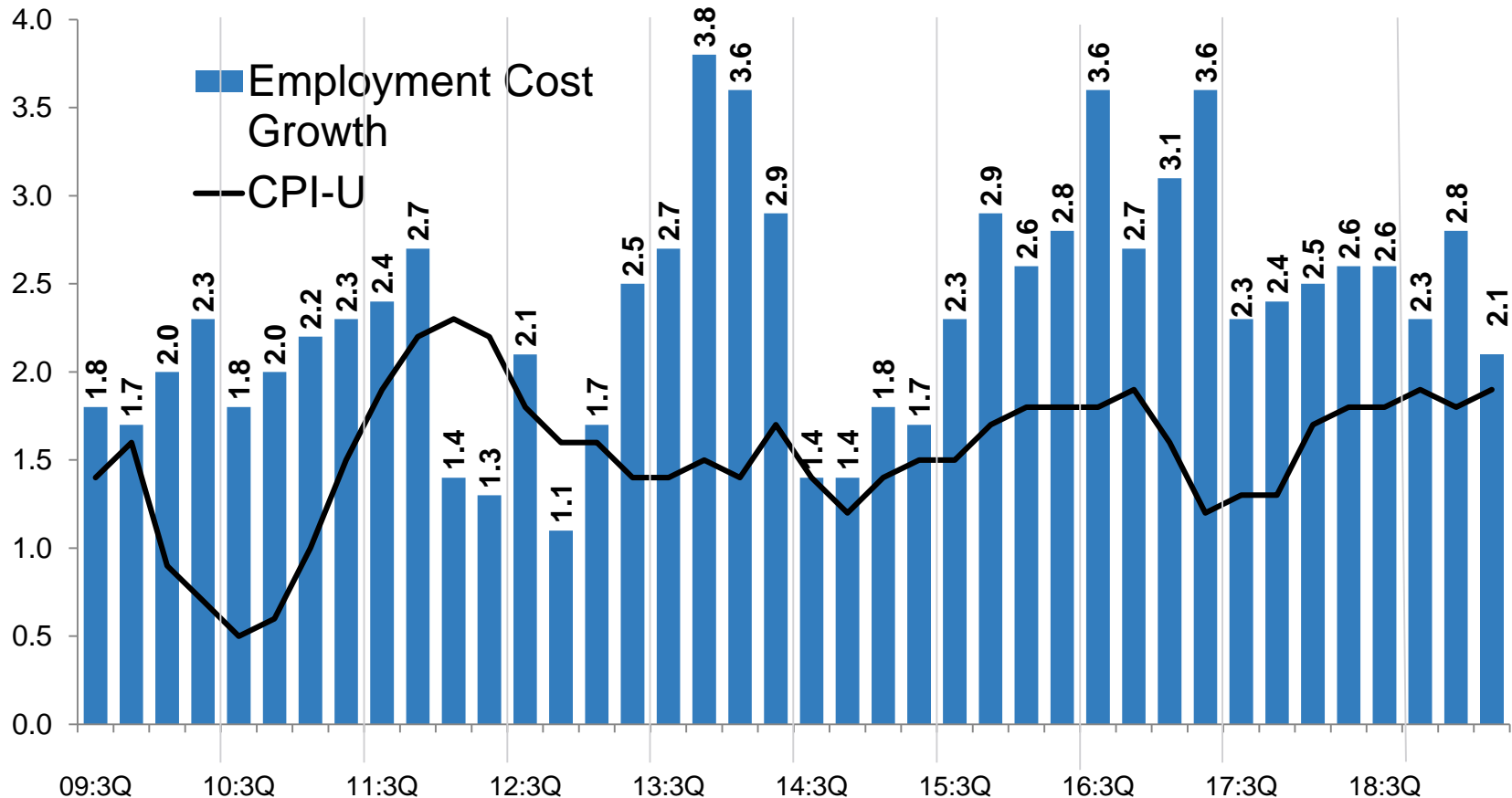
These are occupations that one expects to find at a P/C insurance carrier. Increasingly, routine tasks are being automated and so the work-product relies more on judgment and experience.



Sources: Bureau of Labor Statistics; I.I.I.

Employment Cost Growth, Insurance Carrier Employees

Percent change from same quarter, prior year
Not seasonally-adjusted



Employment cost (wages + benefits) have generally risen faster than inflation by roughly 1 percentage point per year.



Sources: U.S. Bureau of Labor Statistics; Insurance Information Institute.



**INSURANCE
INFORMATION**
INSTITUTE

Thank you