Looking Forward, Looking Back: *The Shifting Risk Landscape for Insurers in 2021*

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Pandemics & P/C Insurance: Outline

- P/C Financial Overview & Outlook Amid the COVID-19 Pandemic
- COVID-19: Actual vs. Expected Impacts on Key Lines
- Investment Market Issues: Volatility Rules, Low Interest Rates are Back
- The Economy and COVID-19: Overview & Outlook
- CAT Loss Update
- Commercial Lines Rate Trends & Reinsurance Market Developments
- COVID-19 Litigation Trends
- Summary and Conclusions
- Q&A

P/C Insurance Industry: Financial Overview Amid the COVID-19 Pandemic

The P/C Insurance Industry Entered the COVID-19 Pandemic from a Position of Financial Strength

Economic, Financial Market, Regulatory and Tort Risks Are Major Challenges Going Forward

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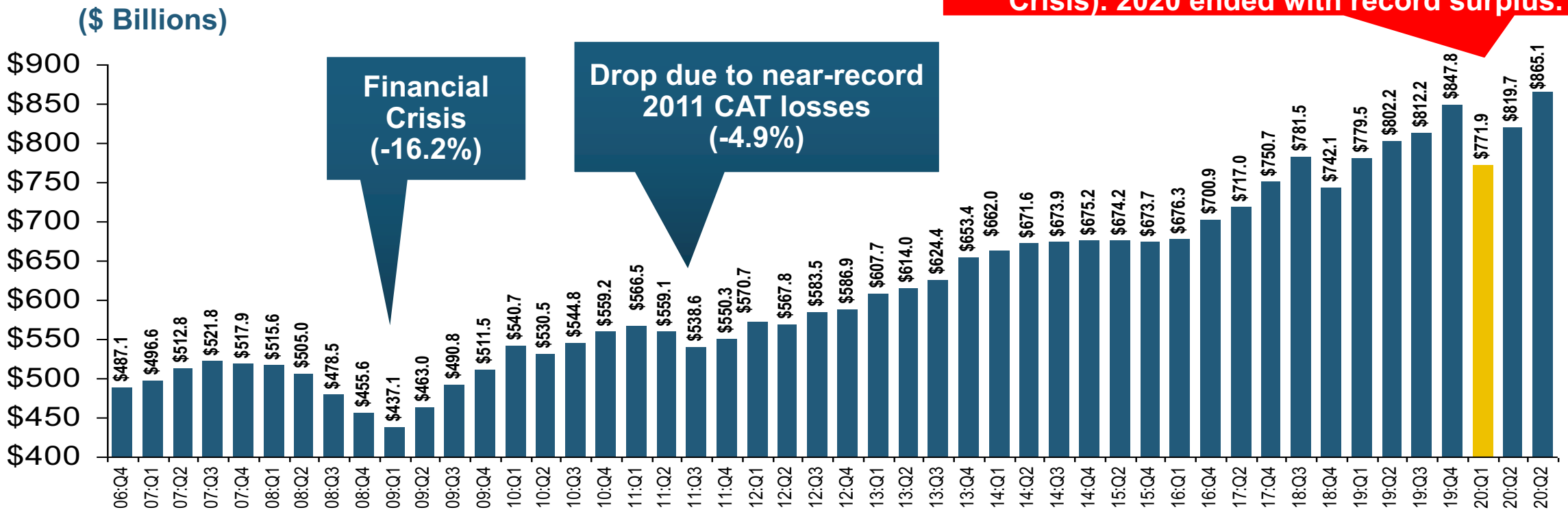
Policyholder Surplus (Capacity), 2006:Q4–2020:Q3

The P/C insurance industry entered the COVID-19 pandemic from a position strength and was able to withstand the 9.0% surplus decline in Q1 2020 (far less than during the Financial Crisis). 2020 ended with record surplus.

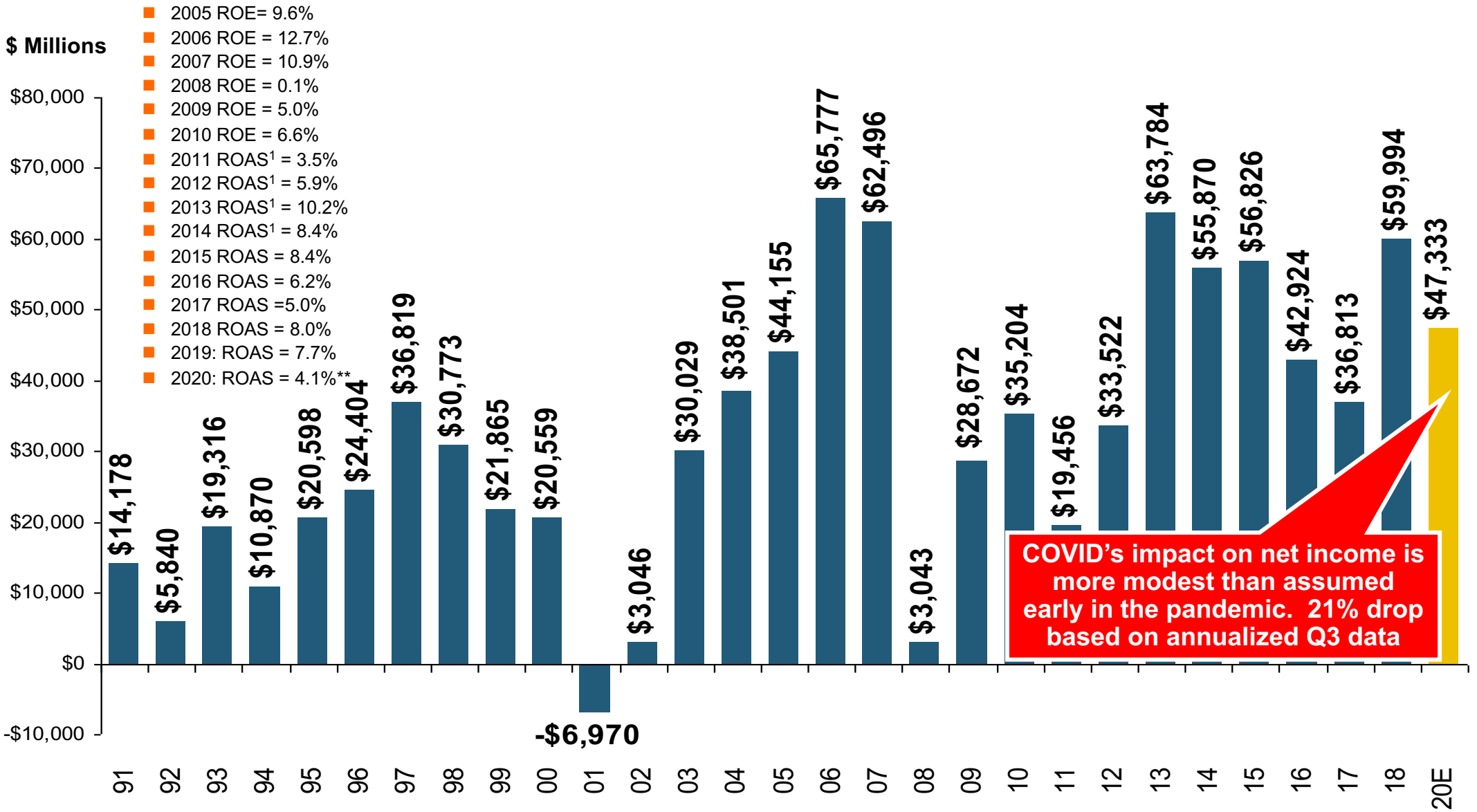


2010:Q1 data includes $22.5B of paid-in capital from a holding company parent for one insurer's investment in a non-insurance business.

Policyholder Surplus is the industry's financial cushion against large insured events, periods of economic stress and financial market volatility. It is also a source of capital to underwrite new risks.

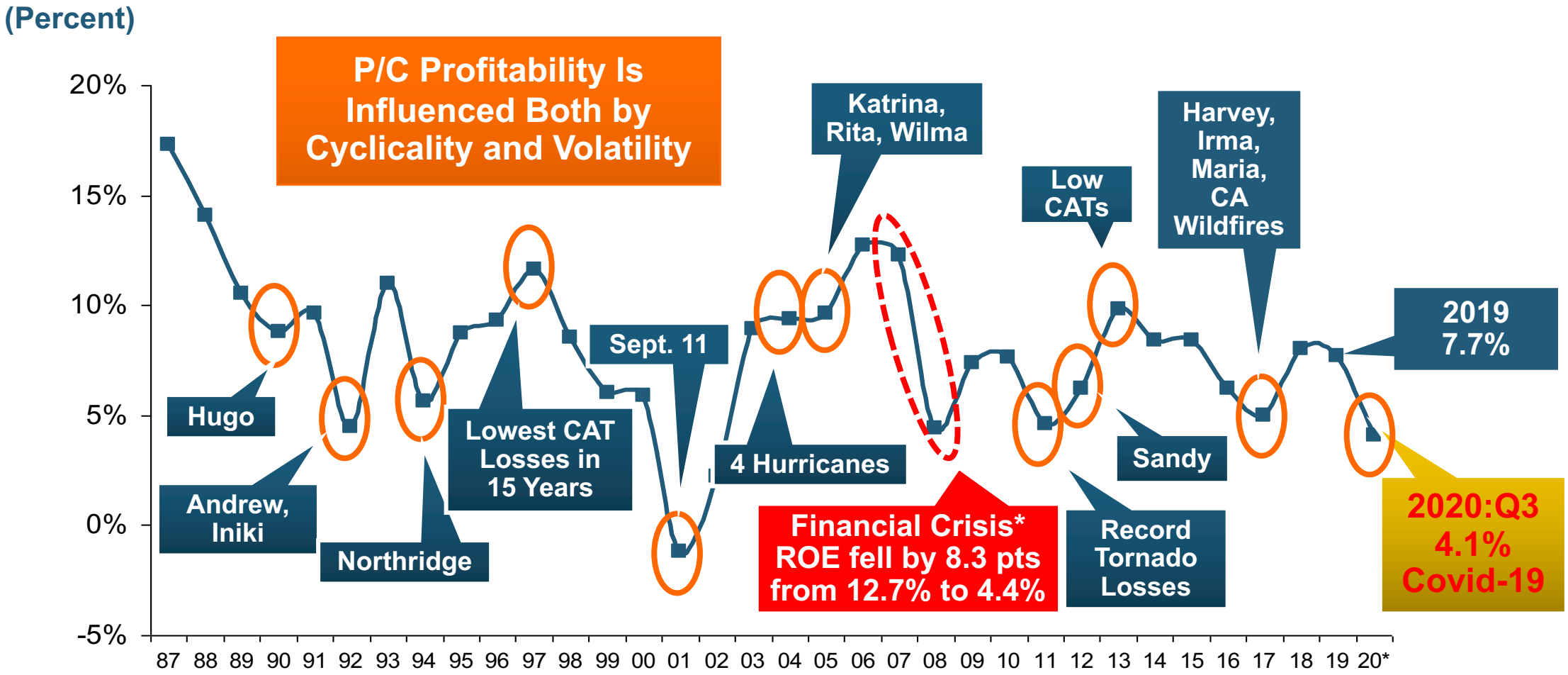
Sources: ISO, A.M .Best; Risk and Uncertainty Management Center, University of South Carolina.

P/C Industry Net Income After Taxes, 1991–2020E*



*2020 estimate based on annualized actual Q3:20 figure of $35.5B. ROE figures are GAAP; [1]Return on avg. surplus. Excludes Mortgage & Financial Guaranty insurers for years (2009-2014).
**Through Q3 2020.
Sources: A.M. Best, ISO.

ROE: Property/Casualty Insurance by Major Event, 1987–2020:Q3*



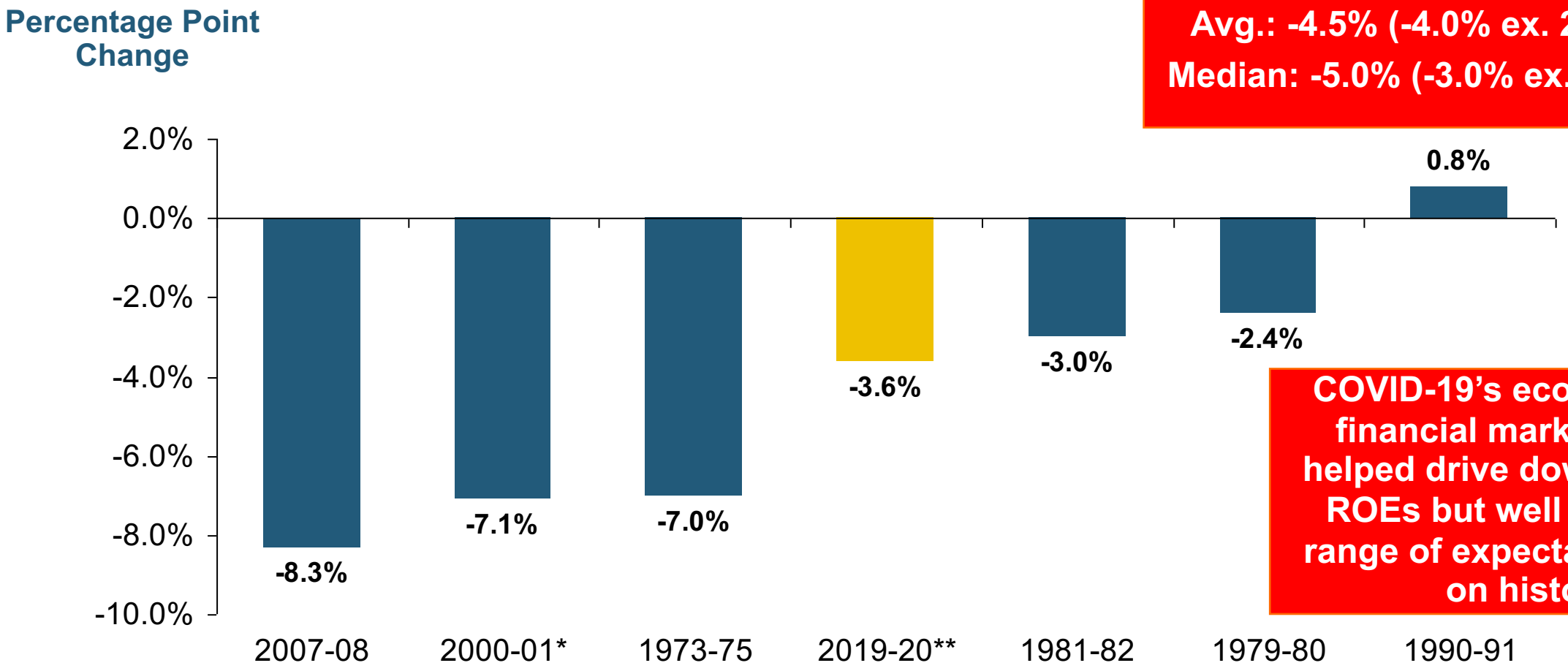
*Excludes Mortgage & Financial Guarantee in 2008 – 2014. 2020:H1 estimate is based on actual Q1 2020 figure of 8.8%.
Sources: ISO, *Fortune*; USC RUM Center.

Percentage Point Change in P/C ROEs During Past Economic Downturns: 1971 - Present

Change in P/C ROE During Past Economic Downturns (pre-Covid)

Avg.: -4.5% (-4.0% ex. 2000-01)

Median: -5.0% (-3.0% ex. 2000-01)



COVID-19's economic and financial market impact helped drive down industry ROEs but well within the range of expectation based on history

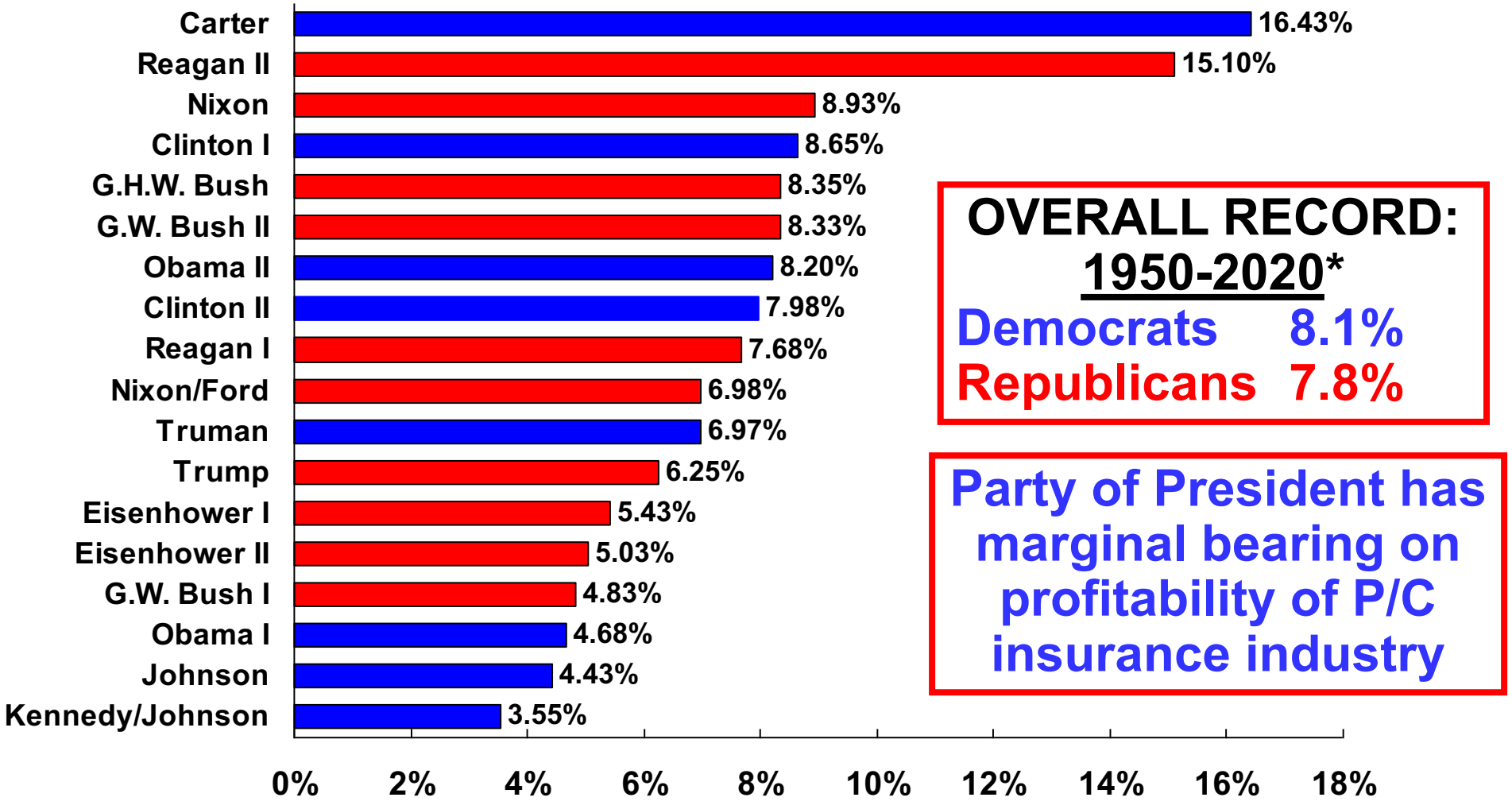
*2000-2001 decline impacted by 9/11 losses.
**As of Q3 2020 vs. annualized Q3 2019 figure

Source: USC Center for Risk and Uncertainty Management.

Profitability & Politics

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

P/C Insurance Industry ROE by Presidential Administration, 1950-2020*

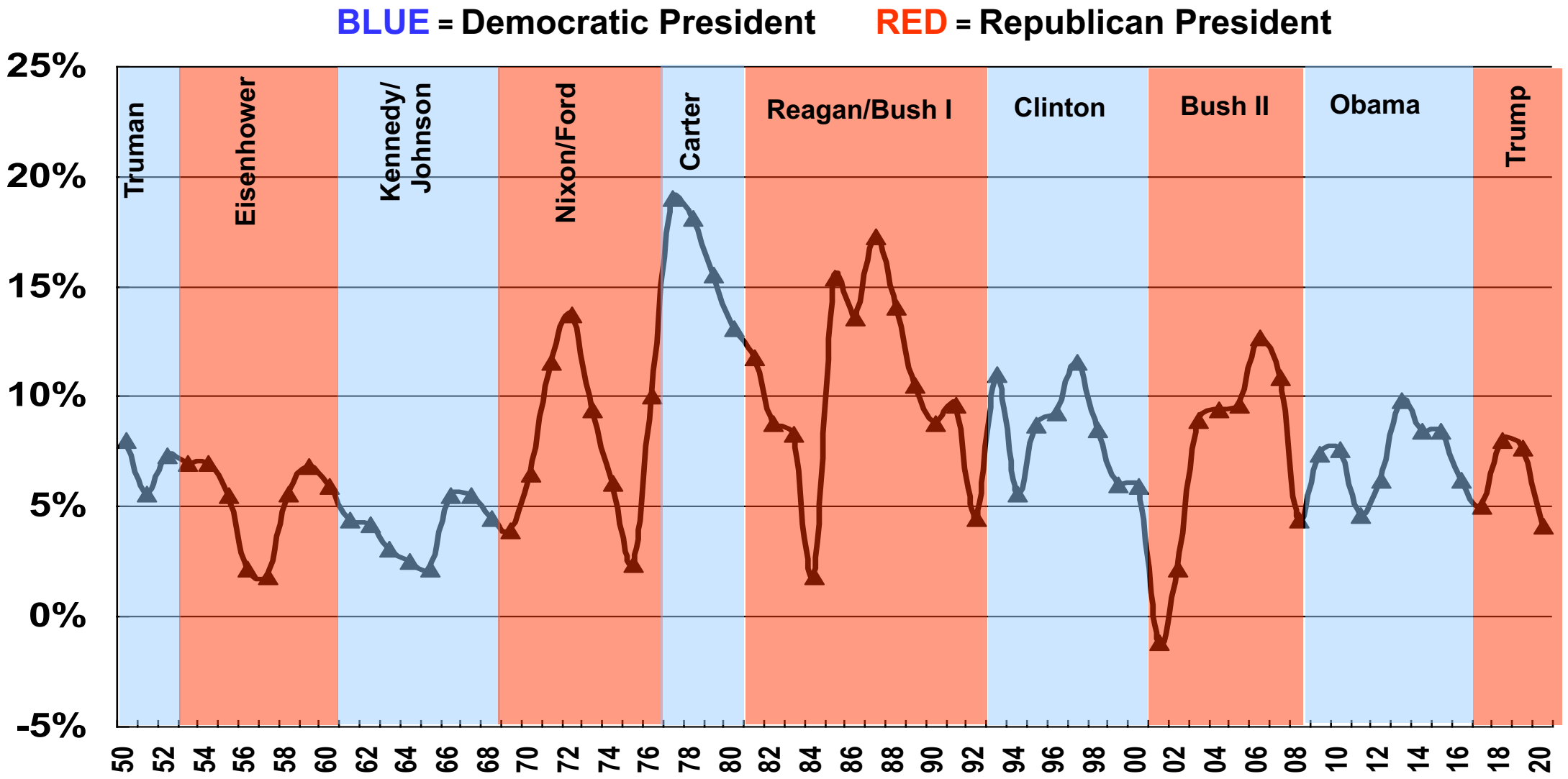


OVERALL RECORD:
1950-2020*
Democrats 8.1%
Republicans 7.8%

Party of President has marginal bearing on profitability of P/C insurance industry

*Trump figure is 2017-2020:Q3 average. ROEs for the years 2008-2014 exclude mortgage and financial guaranty segments.
Source: Risk and Uncertainty Management Center, University of South Carolina.

P/C insurance Industry ROE by Presidential Party Affiliation, 1950- 2020*



*2020 figure is through Q3. ROEs for the years 2008-2014 exclude mortgage and financial guaranty segments.
Source: Risk and Uncertainty Management Center, University of South Carolina.

Growth and Underwriting Performance

COVID-19 Has Had a Mixed Impact on the P/C Insurance Industry

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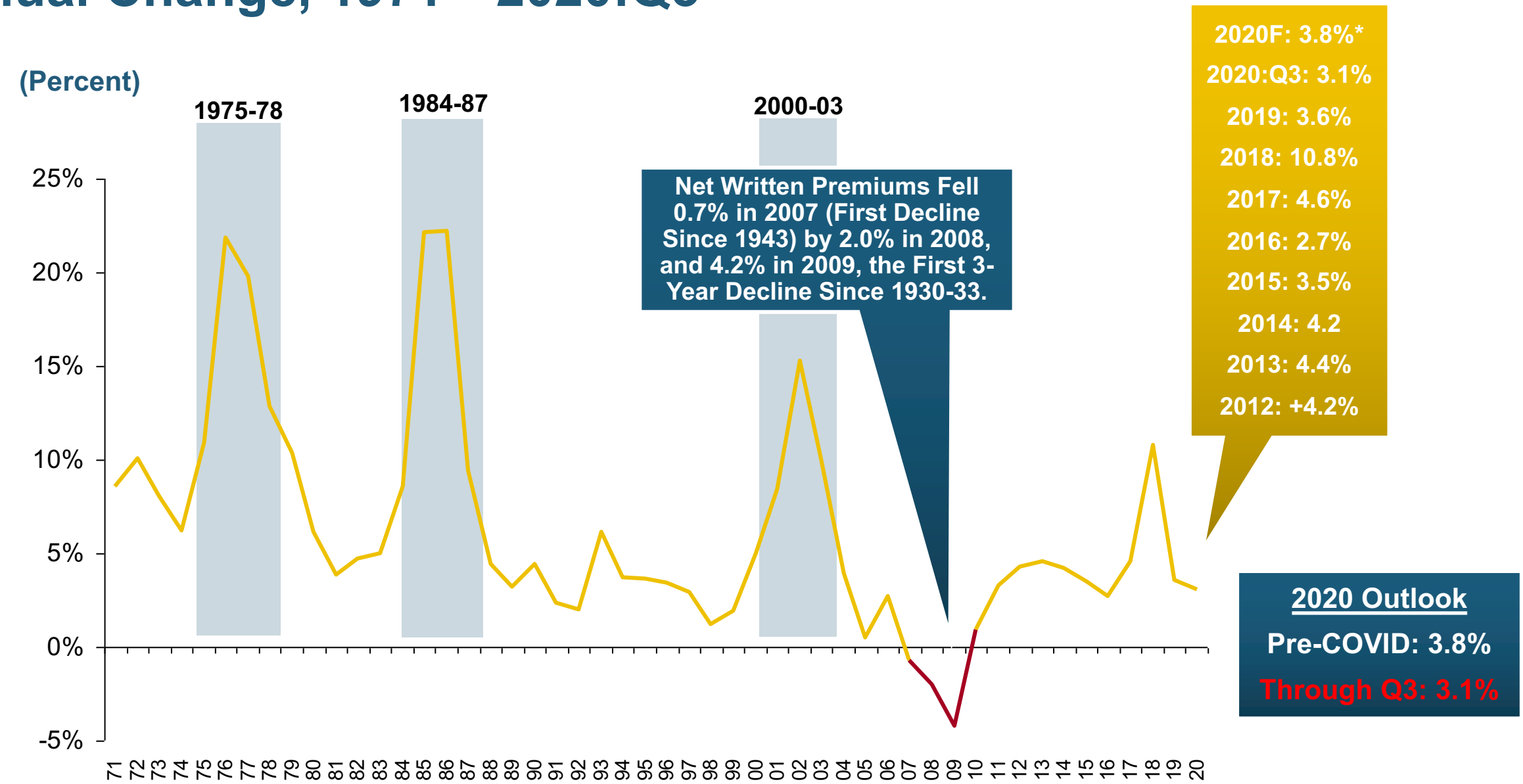
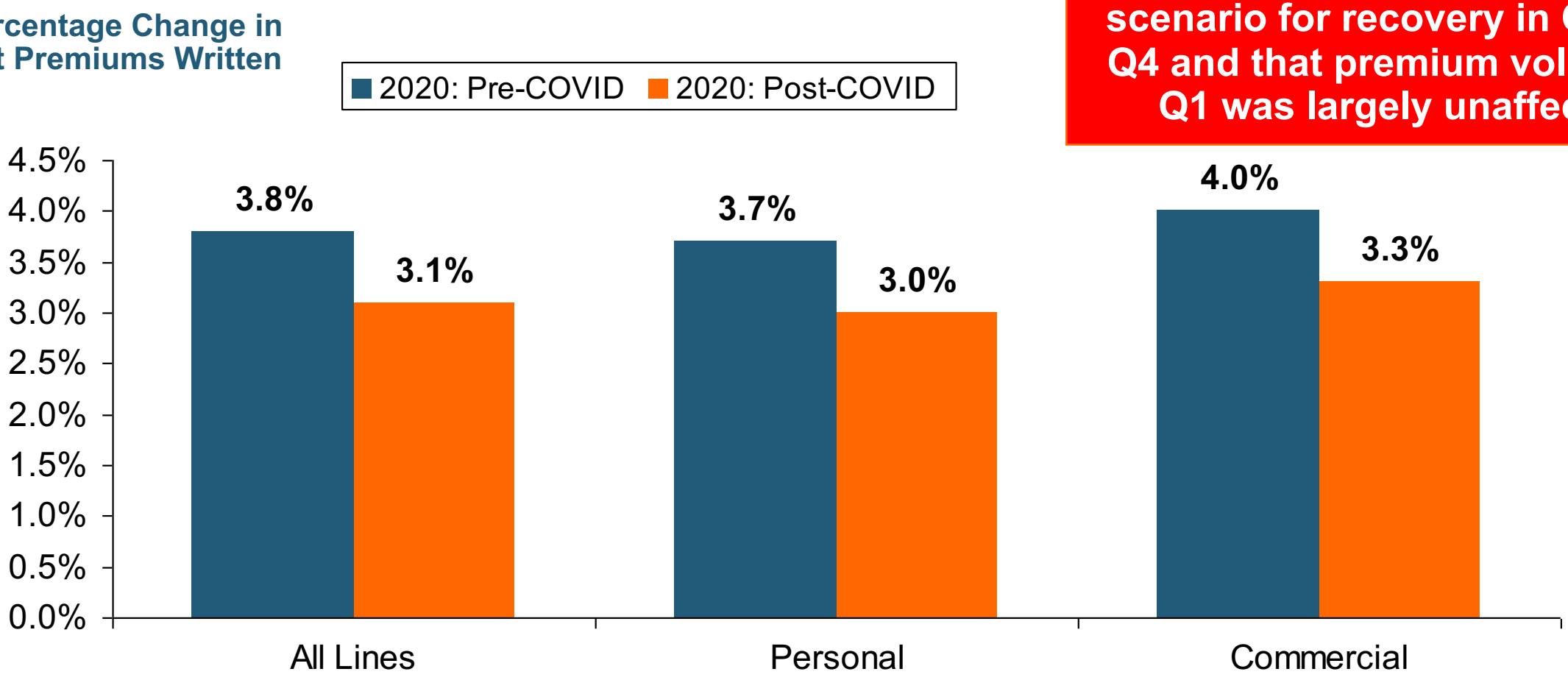
Net Premium Growth (All P/C Lines): Annual Change, 1971—2020:Q3



*Pre-COVID-19 forecast from A.M. Best Review & Preview (Feb. 2020). NOTE: Shaded areas denote "hard market" periods
Sources: A.M. Best (1971-2013, 2020F), ISO (2014-19); Risk & Uncertainty Management Center, Univ. of South Carolina .

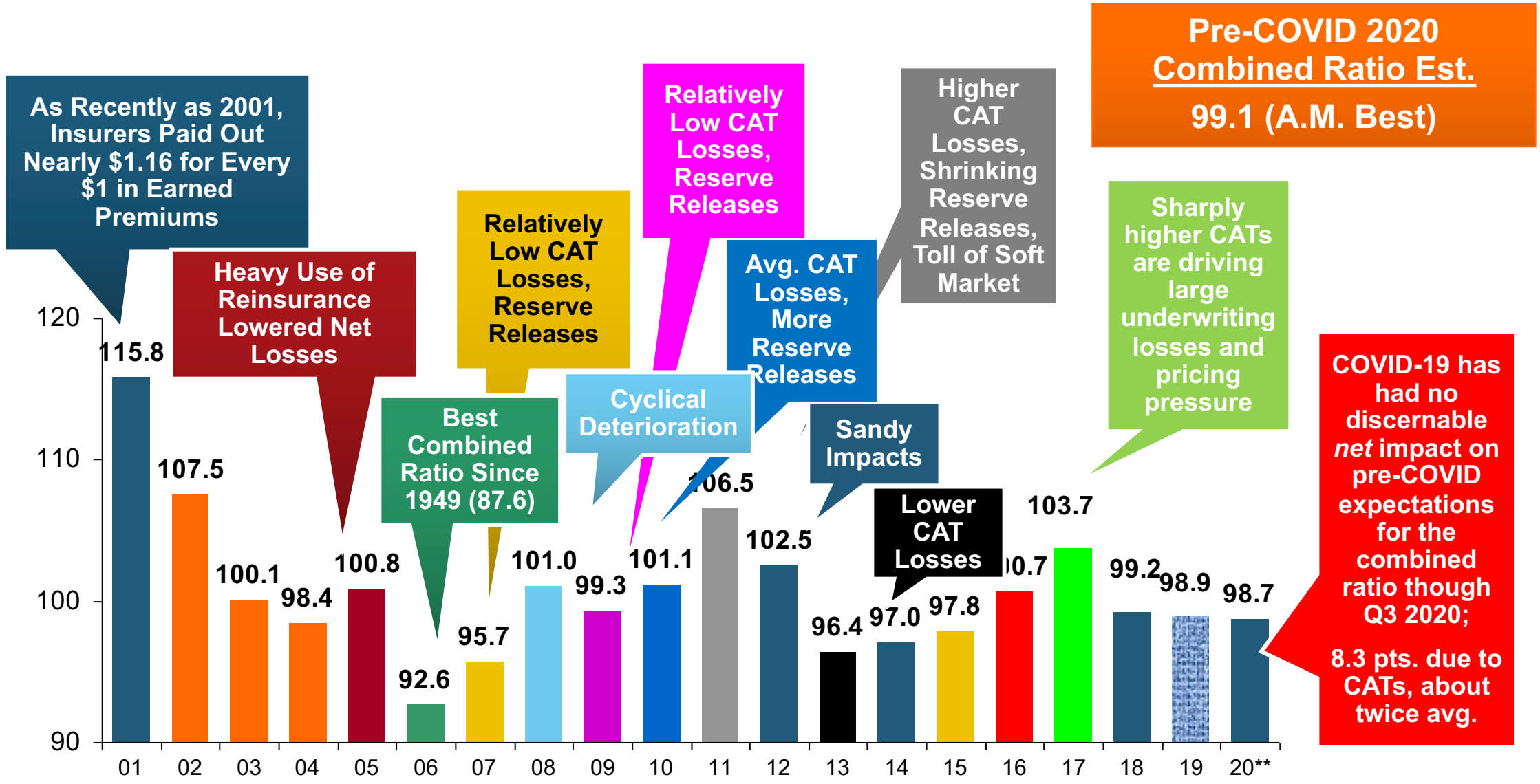
2020 Pre- vs. Post-COVID Growth Expectations for P/C Insurance: From Modest to Miserly

Note: 2020 expectations are based on a modestly optimistic scenario for recovery in Q3 and Q4 and that premium volume in Q1 was largely unaffected



Source: 2020 Pre-COVID-19 figures from Best's Review & Preview (Feb. 2020); Post-COVID estimates from USC Center for Risk and Uncertainty Management.

P/C Insurance Industry Combined Ratio, 2001–2020:Q3*



*Excludes Mortgage & Financial Guaranty insurers 2008--2014.
*First 9 months 2020.
Sources: A.M. Best, ISO (2014-2019).

How Have Actual Results Differed from Reality?

A Review of Early Predictions of COVID's Impact on Insurers

US P/C Results Have Generally Been Better than Anticipated

Potential Impacts of COVID-19 on *Written Premium* in 2020, by Key Line

Line	Estimated Premium Impact
Workers Compensation	12.5% to 25% reduction in premium written in 2020 ***(equates to $5.9B to $11.75B DWP)***
Business Interruption & Contingency	7% to 13% reduction in premium volume (US & UK)
General Liability*	$1.5B to $6.3B premium reduction in US
Personal Auto	~$10B in refunds, rebates (equates to ~4% of DWP)
Personal Travel Insurance	29% to 78% reduction in premium written (US & UK)
Personal/Comm. Motor	~10% reduction in US; 0% to 11% reduction in UK
Marine/Aviation/Transport	$0.7B-$1.5B (US); $0.6 - $1.2B (UK)

APRIL/MAY 2020 ESTIMATES

*Includes nursing home professional liability.

Source: Derived from Willis Towers Watson, *Scenario Analysis of COVID-19 Pandemic* (Fig.11, 14), May 2020. and other sources; Risk and Uncertainty Management Center, University of South Carolina.

Potential Impacts of COVID-19 on *LOSSES* in 2020, by Key Line

Line	Estimated Loss Impact
Workers Compensation	$0.2B - $92B ***(depends on severity of pandemic and "presumption" determination)***
Business Interruption & Contingency	$2B - $22B (US); $1.1B - $13.9B (UK)
General Liability*	$0.7B to $27B loss across US & Bermuda markets
Personal/Comm. Motor	$26B - $57B reduction in personal auto and $4.2B - $9.4B commercial (US); $1 - $7B overall reduction in UK
Mortgage	$0 - $1.7B loss across US & Bermuda markets
D&O	$0.6 - $4.0 loss across US & Bermuda markets
Marine/Aviation/Transport	$0.3B-$1.3B reduction (US); $0.6 - $1.1B (UK)

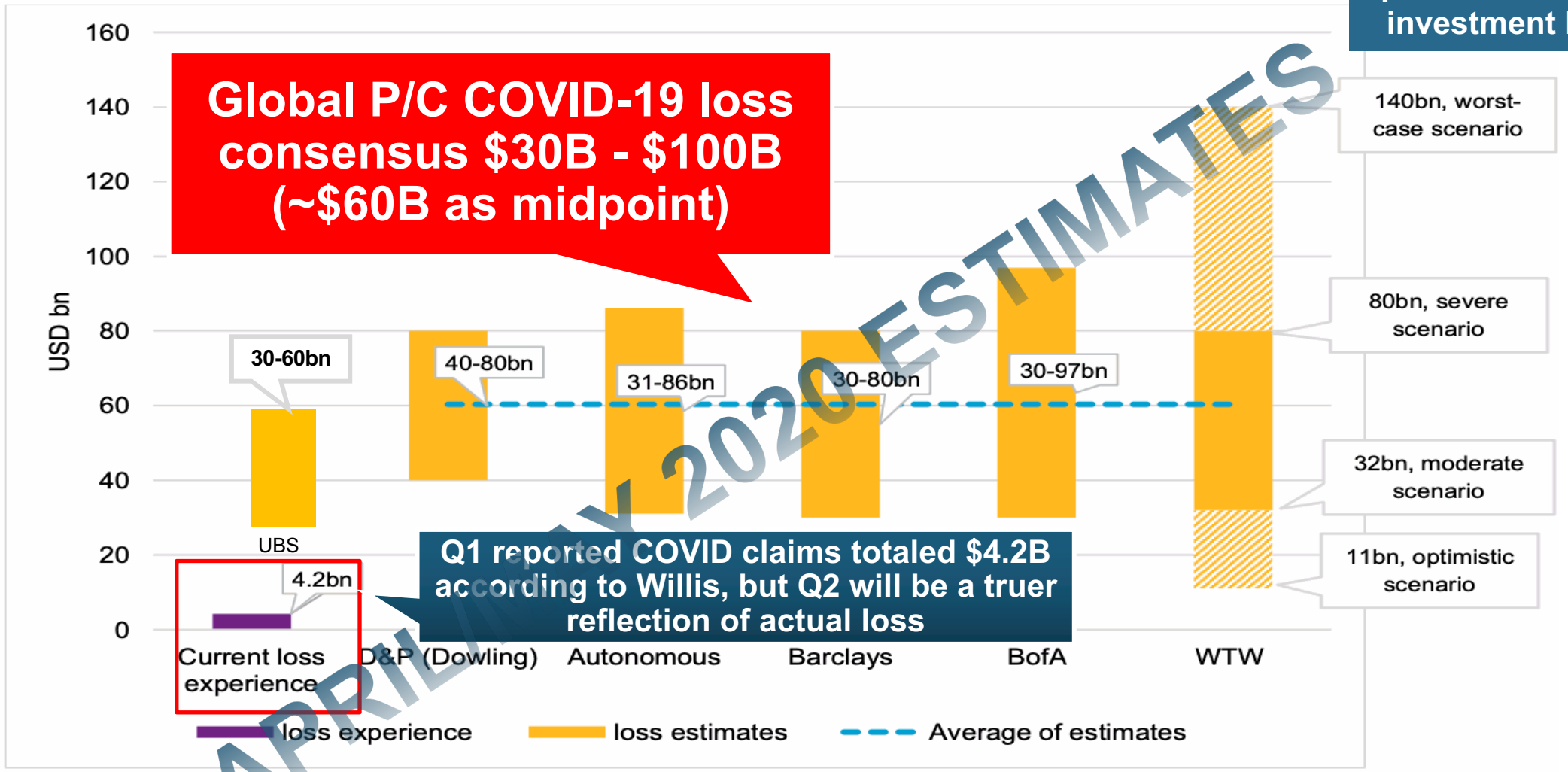
APRIL/MAY 2020 ESTIMATES

*Includes nursing home professional liability.

Source: Derived from Willis Towers Watson, *Scenario Analysis of COVID-19 Pandemic* (Fig.11, 14), May 2020. and other sources; Risk and Uncertainty Management Center, University of South Carolina.

COVID-19 Announced Losses vs. Top-Down Industry Estimates (as of May 12, 2020)

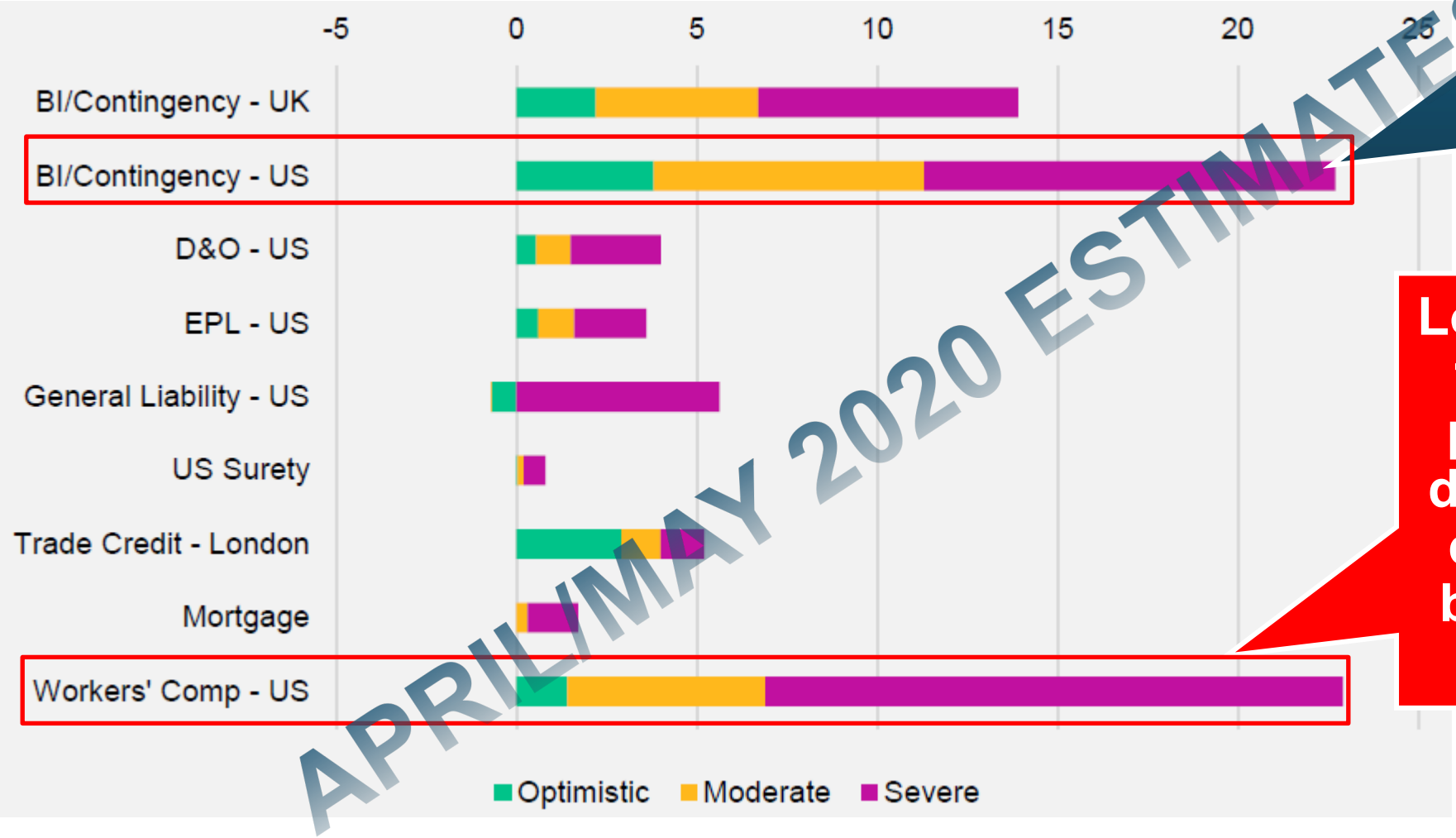
Lloyd's: Says its own p/c claims could reach $4.3B by June 30. Estimates global p/c losses at $107B; Global investment losses = $96B*



*Lloyd's CEO John Neil appearance on CNBC, May 14, 2020: https://www.cnbc.com/2020/05/14/lloyds-of-london-coronavirus-will-be-largest-loss-on-record-for-insurers.html

Sources: Company disclosures, Dowling & Partners, Barclays Research, Autonomous Research, BofA Global Research, UBS Securities, Willis Towers Watson from Artemis.bm accessed at https://www.artemis.bm/news/consensus-emerging-on-30bn-to-100bn-covid-19-industry-loss-willis-re/; Risk and Uncertainty Management Center, University of South Carolina.

Potential Impact of COVID-19 on Insured Losses by Line



APRIL/MAY 2020 ESTIMATES

Business Interruption losses are potentially material even under the moderate severity scenario

Loss impacts of COVID-19 on the WC line are potentially severe but depend not only on the course of the disease but state decisions on presumption

Source: Willis Towers Watson, *Scenario Analysis of COVID-19 Pandemic* (Fig.10), May 2020; Risk and Uncertainty Management Center, University of South Carolina.

Reasons Why P/C Insurance Worst-Case COVID Scenarios Failed to Materialize (*So Far*)

- Economic Recovery Proceeding More Quickly than Anticipated
- Rapid Financial Market Recovery (*and then some…*)
- Massive Government Stimulus and Accommodative Fed Policy
- Worst-Case Epidemiological Outcome Avoided
- Record Pace of Vaccine Development
- Employers Did a Reasonably Good Job Protecting Workers from Exposure
- Many States Did Not Repeat Spring Lockdowns
- Litigation Outcomes Generally Favor Insurers
- WC Presumption Expansions Did Not Lead to Explosion in Claims
- Offsetting Exposure Reductions in Many Lines

BUT…

There Is No Questions that the Economic Consequences of COVID Are Massive and Ongoing

The Economic Costs of COVID Vastly Outstrip the Insured Loss Component

Viral Outbreaks Are Not An Insurable Risk

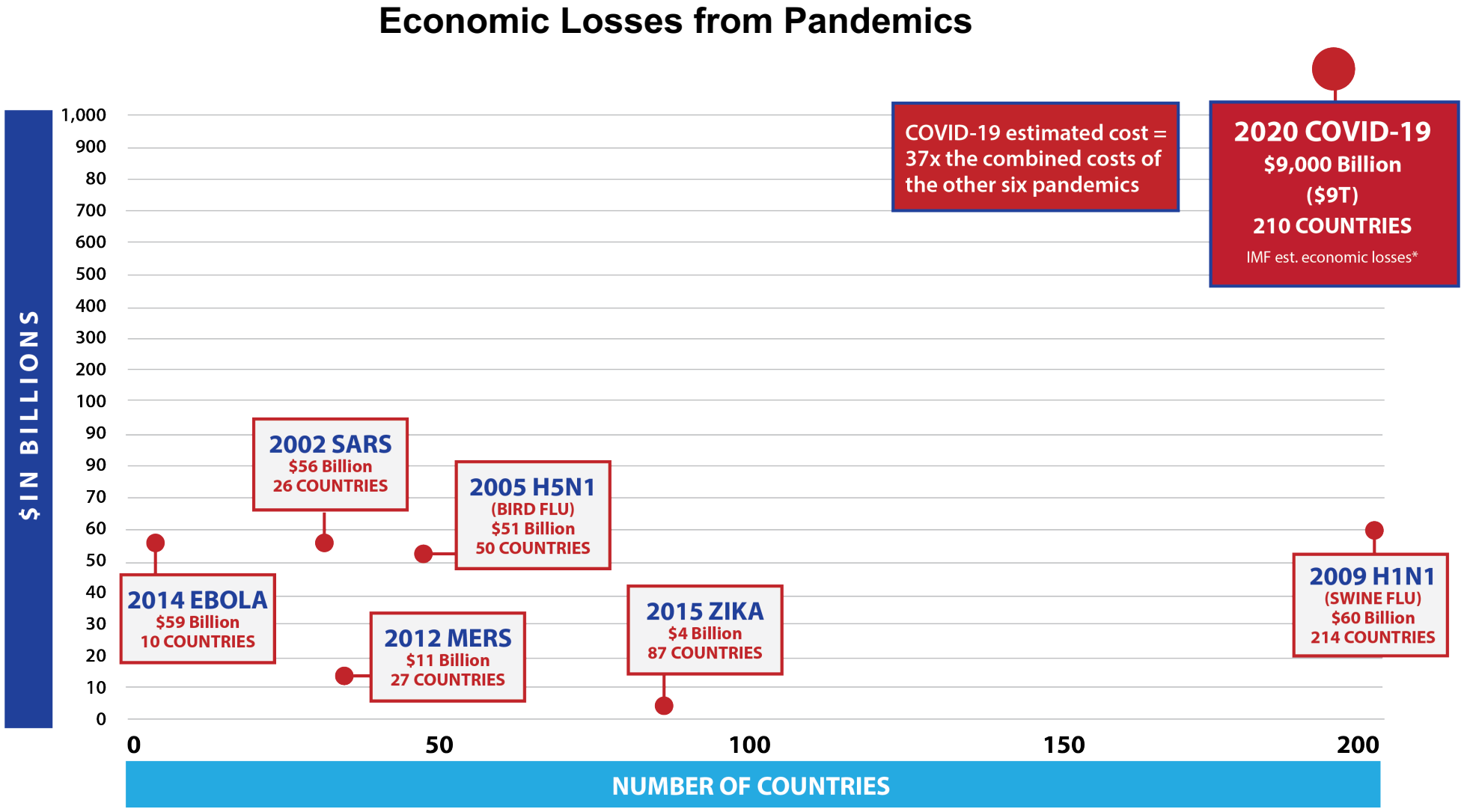
Pandemics are frequent, severe, and widespread (7 pandemics with multi-billion$ economic losses in just the last 18 years)

For Reference

2005 Katrina $58 Billion

2001 9/11 $48 Billion

(insured losses)

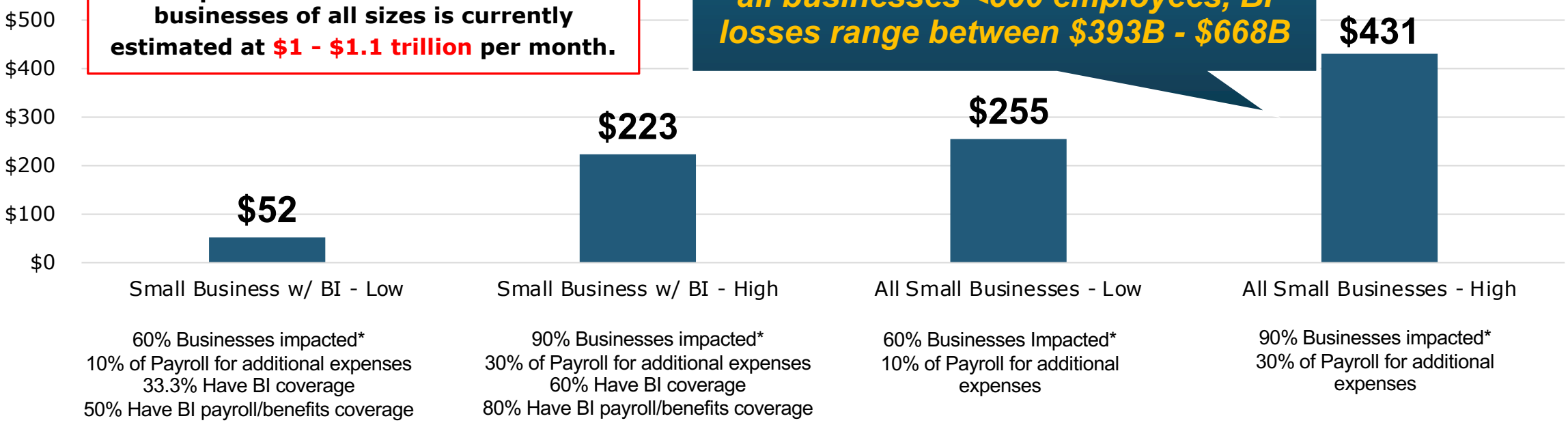


*Sources: APCIA using published reports, including IMF, World Bank, Learnbonds.com; APCIA adjustment to 2020 USD

Estimated Monthly U.S. Business Interruption Coronavirus Losses for Small Business—Potential Range (<100 Employees; $Bill)

The potential for such losses for all businesses of all sizes is currently estimated at $1 - $1.1 trillion per month.

Monthly BI losses for small business vary widely depending on underlying assumptions but expansive legislation would result in higher estimates; *For all businesses <500 employees, BI losses range between $393B - $668B*

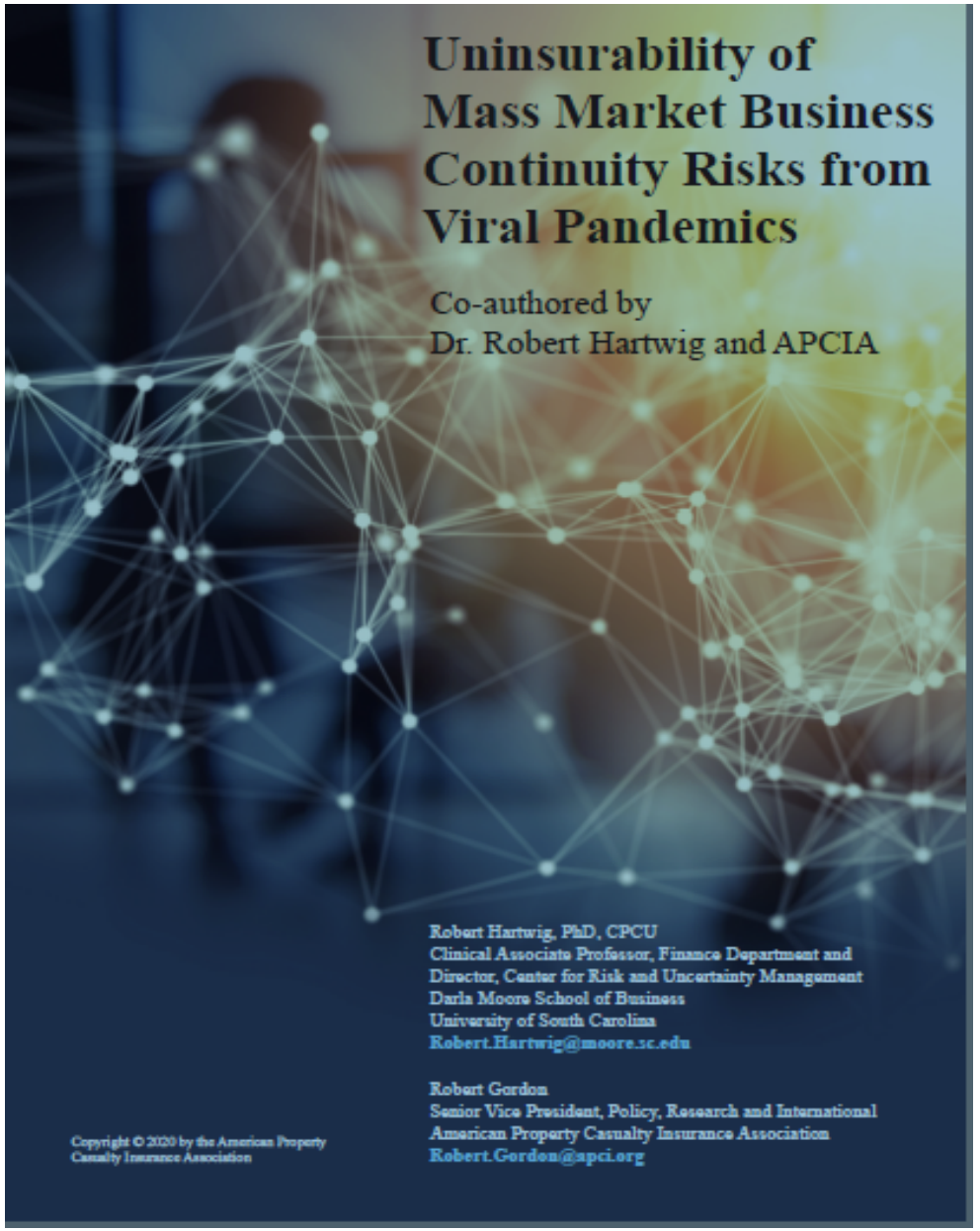


* Businesses impacted: Proportion of businesses completely or substantially closed related to coronavirus
Assumptions: Losses if standard insurance policy exclusions for viruses/pandemics are voided and physical loss/damage requirement is stricken; three main coverages - profit lost, payroll/benefits, additional expenses; average annual $2m revenue and 7% profit margin; non-wage benefits of small businesses are 25% less than that for average US businesses

Source: APCIA, April 2020.

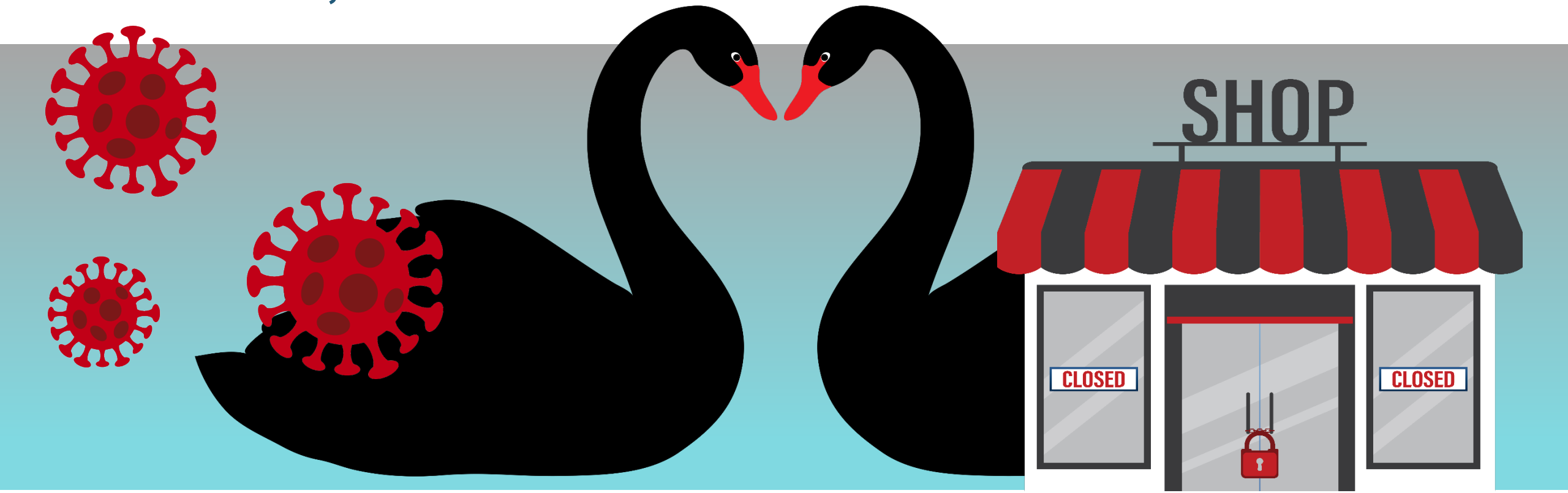
Paper on Insurability of Pandemic Risk

- Large scale business continuity risks from pandemics are generally note insurable in the private sector
- Business continuity risks are largely undiversifiable within private insurance markets and are highly correlated with other risks (e.g., investment risks)
- Large scale business continuity losses pose a potentially systemic risk to the industry and overall economy
- Import role for government



Download at: https://www.uscriskcenter.com/wp-content/uploads/2020/05/Uninsurability-of-Pandemic-Risk-White-Paper-Hartwig-APCIA-FINAL-WORD.pdf

Government Mandated Business Closures Were the Real Black Swan, Not the Coronavirus



- The US (and world) has endured several other major infectious disease outbreaks killing 100,000+ Americans without shutting down the economy
  - Hong Kong Flu (1968-70)
  - Asian Flu (1957-58)

- It is the reaction to the virus that is unprecedented and represents the *true* Black Swan event
- The ramifications of this decision will be consequential for a generation (e.g., $3 trill. in debt)

Sources: CDC; Risk and Uncertainty Management Center, University of South Carolina

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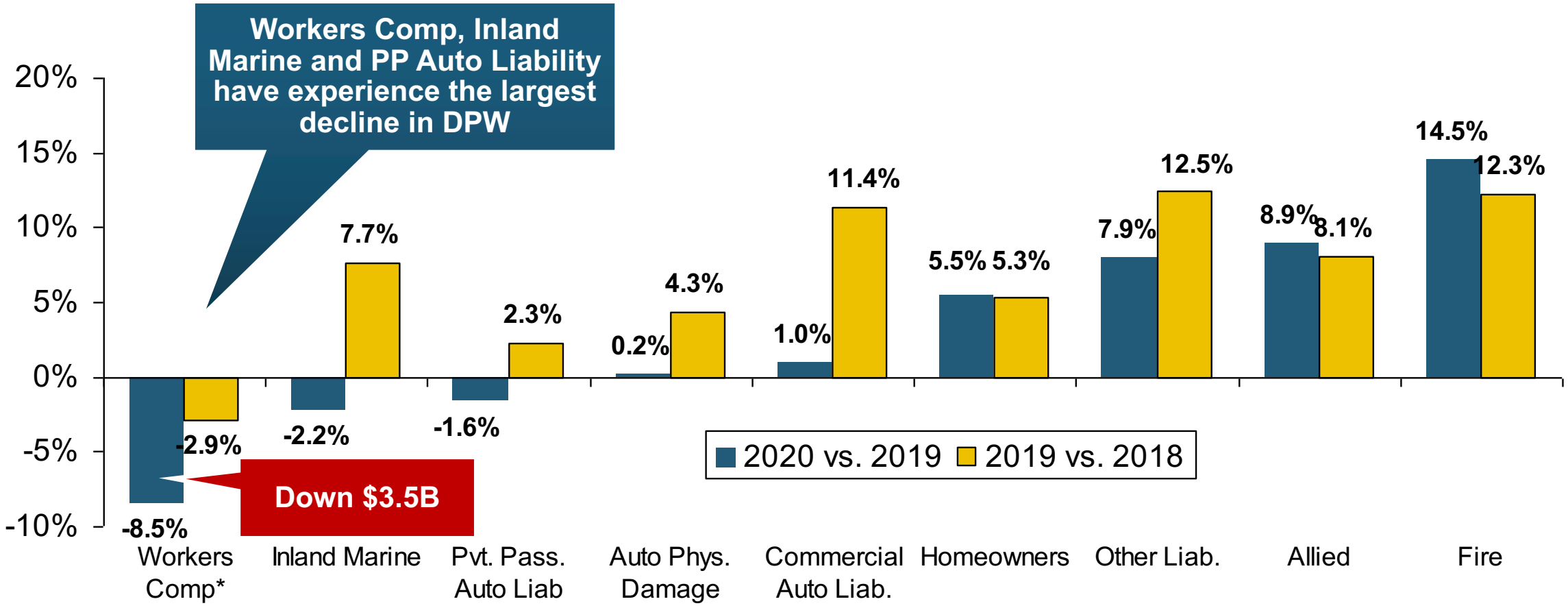
COVID-19: Impacts on Premiums and Claims

Economically Sensitive Commercial Lines Were Most Impacted in Terms of Growth

Auto Claims Plunged During the Early Stage of COVID—Will Claims Spike as the Economy Recovers?

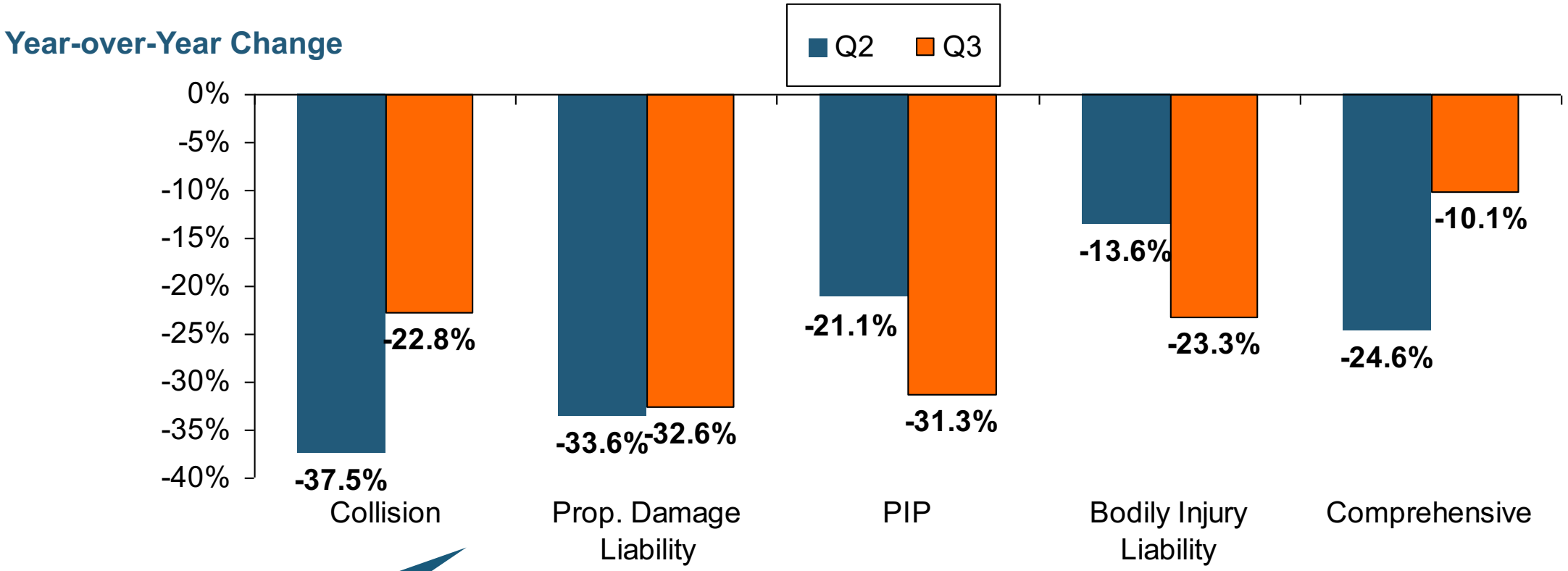
COVID's Impact on DPW Growth for Largest P/C Lines: First 9-Mos. 2020 and 2019 vs. Same Period Previous Year

Percent Change: First 9-Most 2020 vs. First 9-Mos. 2019



Source: A.M. Best, First Look: *9-Month 2020 P/C Financial Results*; Risk and Uncertainty Management Center, Univ. of South Carolina.

Personal Auto Claim Frequency Trends Significantly Impacted by COVID: Q2 and Q3 2020 vs. Q2 and Q3 2019

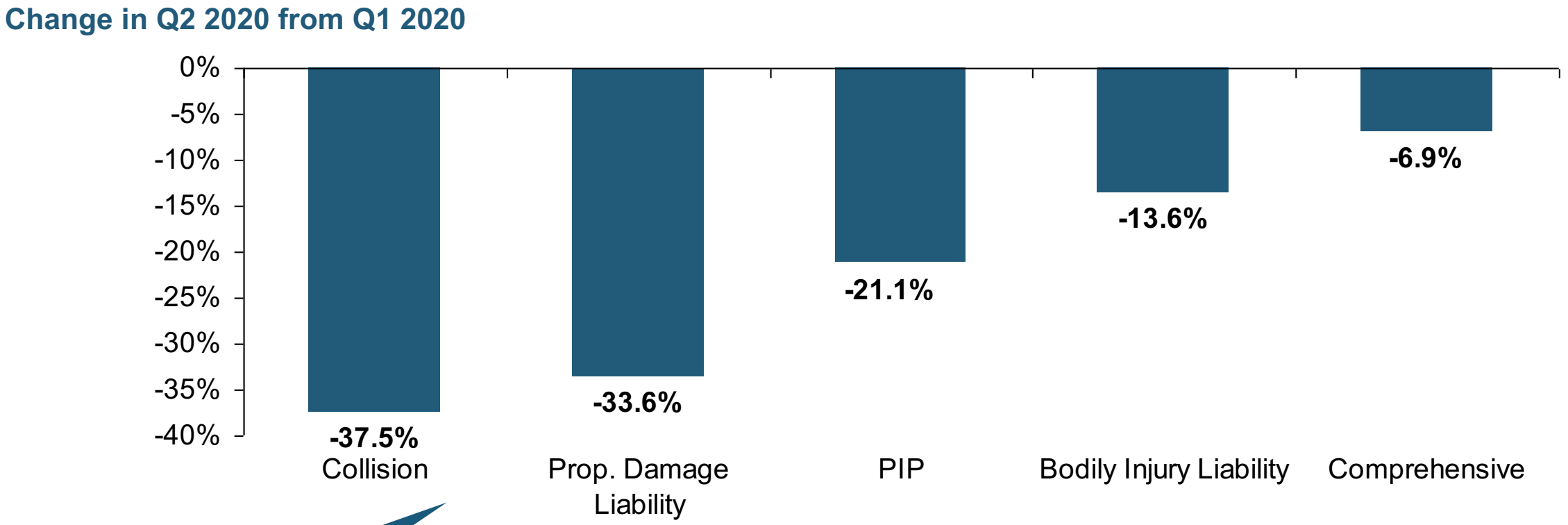


Collision and PD Liability claims plunged by more than 1/3

Auto Claims Fell Sharply at the Height of the Pandemic, at least through Q3 2020

Source: ISO/PCI *Fast Track* data for Q3 2020; Risk and Uncertainty Management Center, Univ. of South Carolina.

Personal Auto Claim Frequency Trends Significantly Impacted by COVID, Q2 vs. Q2 2020 (latest available)



Collision and PD Liability claims plunged by more than 1/3

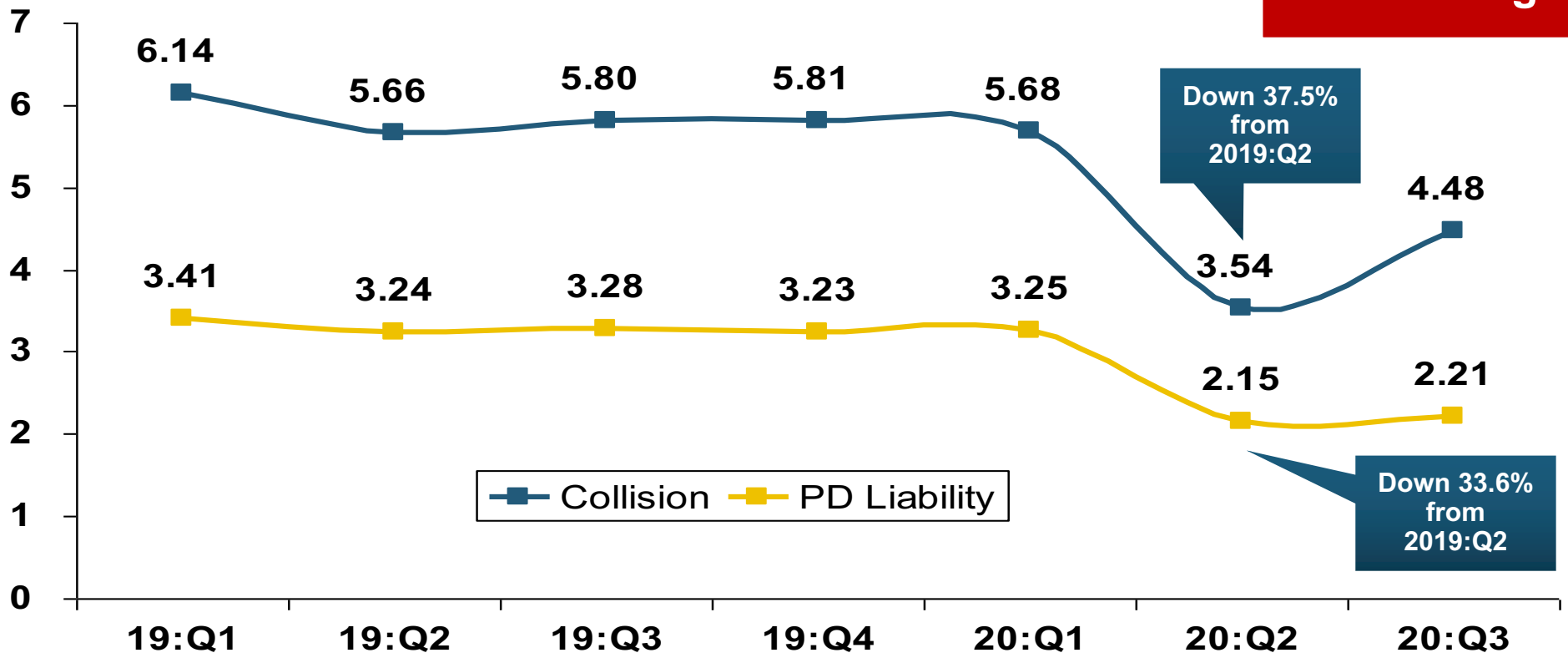
Auto Claims Fell Sharply at the Height of the Pandemic. Anecdotal Evidence Suggests Claiming Behavior Has Come Close to Normalizing

Source: ISO/PCI *Fast Track* data for Q2 2020; Risk and Uncertainty Management Center, Univ. of South Carolina.

Personal Auto BI Collision and Property Damage Liability Claim Frequency: 2019:Q1 – 2020:Q3

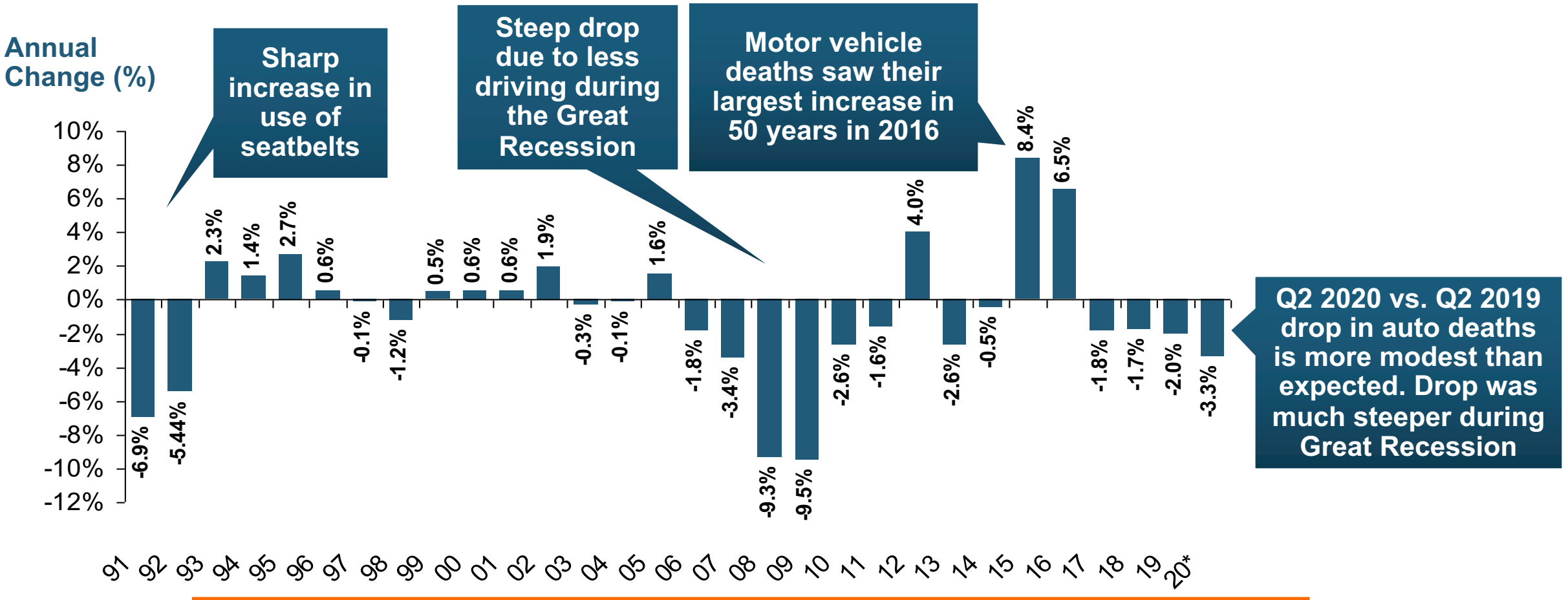
(Number of Claims per 100 Earned Car Years)

Claim frequencies fell s in sharply during the pandemic, but are beginning to rebound



Source: ISO/PCI *Fast Track* data for Q2 2020; Risk and Uncertainty Management Center, Univ. of South Carolina.

U.S. Annual Change in Automobile Deaths, 1991- 2020*



Driving Has Been Getting Safer For Decades, A Trend that Is Likely to Continue, though a Post-COVID Spike Is Likely

Source: Insurance Institute for Highway Safety and Highway Loss Data Institute: https://www.iihs.org/iihs/topics/t/general-statistics/fatalityfacts/overview-of-fatality-facts; NHTSA: https://www.nhtsa.gov/press-releases/2019-fatality-data-traffic-deaths-2020-q2-projections#:~:text=The%20FARS%20data%20indicate%20that,the%20same%20period%20in%202019; Risk and Uncertainty Management Center, University of South Carolina.

Catastrophe Loss Update: *Major Driver of Rate Pressure*

The 2020s Got Off to an Ominous Start

CAT Losses for the 2010s Were Up Materially—Costliest Ever

Primary, Reinsurance and Retro Markets All Impacted and Are Pressuring Rates

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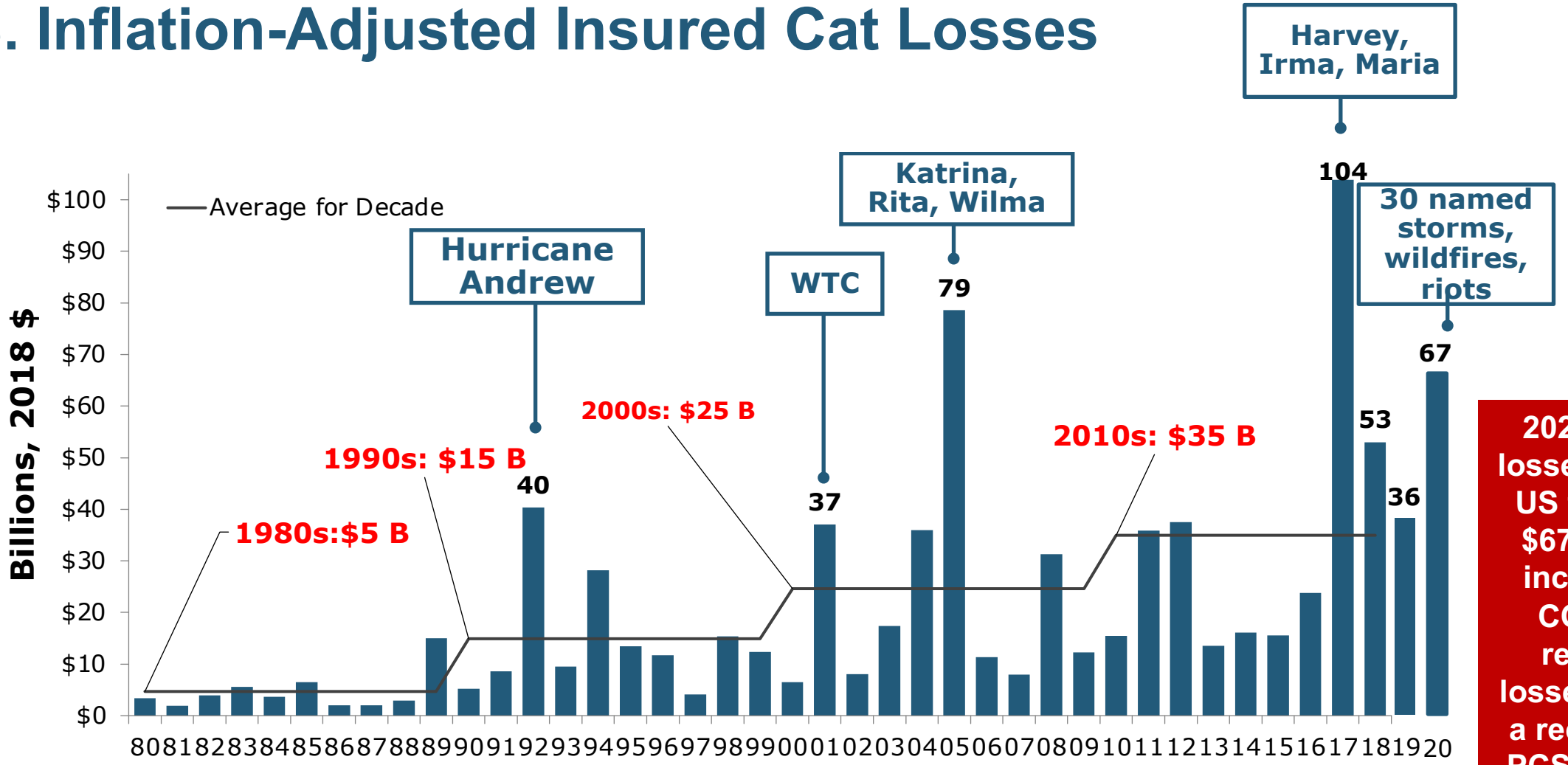
2020 U.S. Insured Catastrophe Highlights

- $67B in insured nat CAT losses—(3rd costliest year ever behind 2017, 2005)
- 71 designated PCS CATs, the most in PCS's 72-year history
- 10 declared hurricane/TS events, a PCS record (30 named storms in 2020)
  - ~$26B insured losses in North America
- 17 declared wildfire events, a new record (6 events in 2017 = previous record)
  - ~$11B insured
- ~5 million CAT claims
- 18 PCS events with insured losses > $1B, a new record
- ~$1.5B in insured riot losses + other unusual manmade events (Nashville)

U.S. Inflation-Adjusted Insured Cat Losses



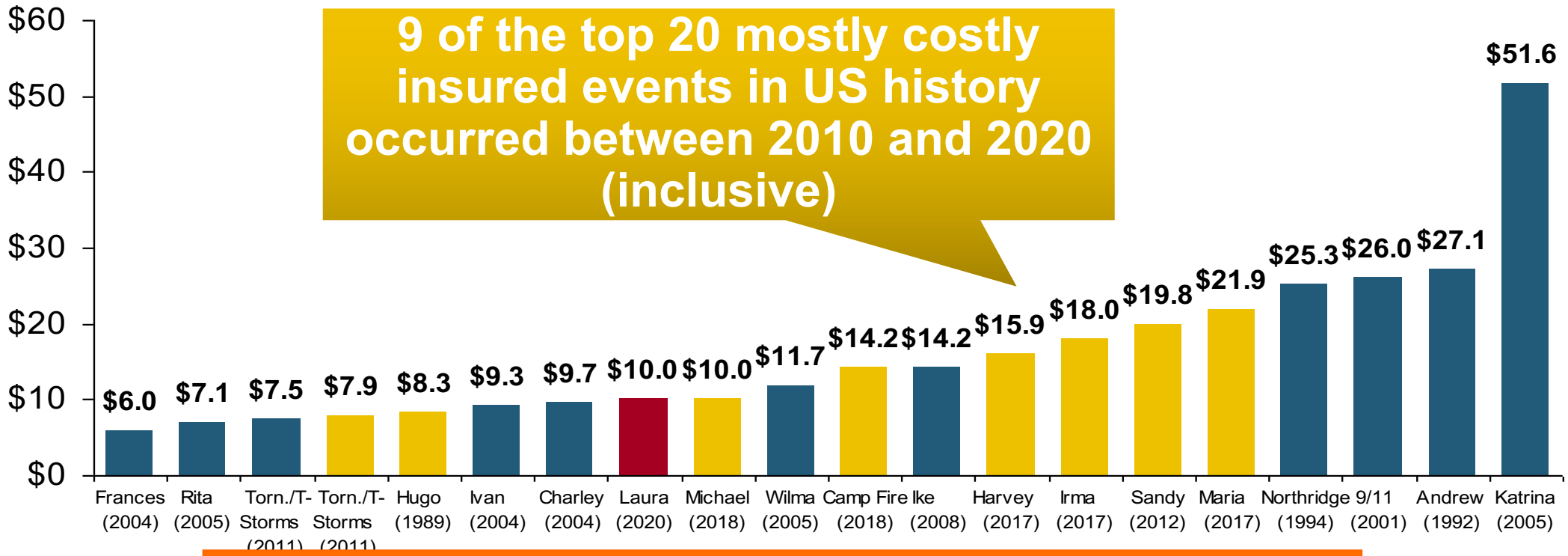
2020 CAT losses in the US totaled $67B (not including COVID-related losses) from a record 71 PCS events

Average Insured Loss per Year for 1980-2020 is $22.2 Billion

Sources: Property Claims Service, a Verisk Analytics business (1980-2019); 2020 figure from Munich Re; Insurance Information Institute; University of South Carolina, Risk & Uncertainty Management Center.

Top 20 Most Costly Disasters in U.S. History—Katrina Still Ranks #1

(Insured Losses, 2017 Dollars, $ Billions)*

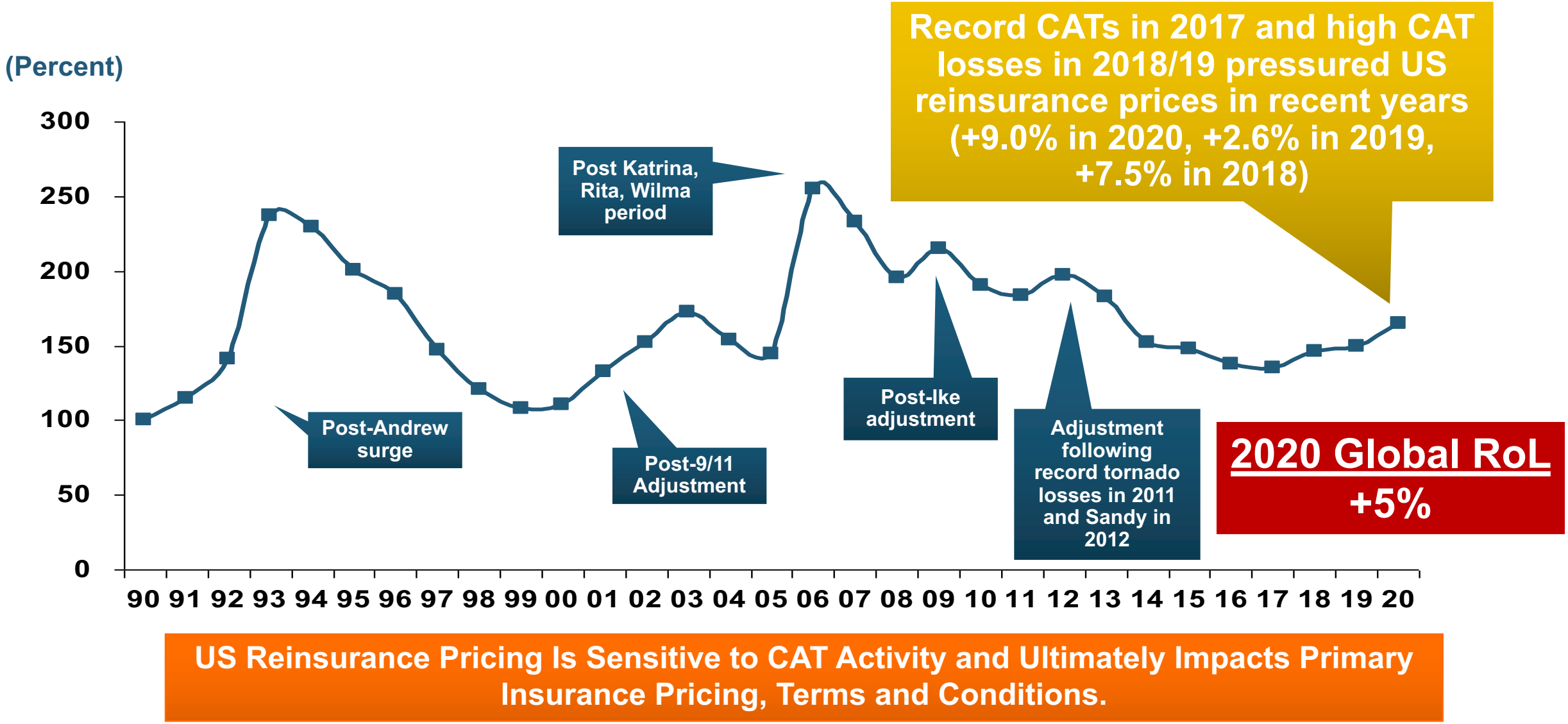


17 of the 20 Most Expensive Insurance Events in US History Have Occurred Since 2004

*Estimated.

Sources: PCS, RMS, Karen Clark & Co; USC Center for Risk and Uncertainty Management adjustments to 2017 dollars using the CPI.

US Property Catastrophe Rate-on-Line Index: 1990 – 2020*



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

*As of January 1 each year.

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

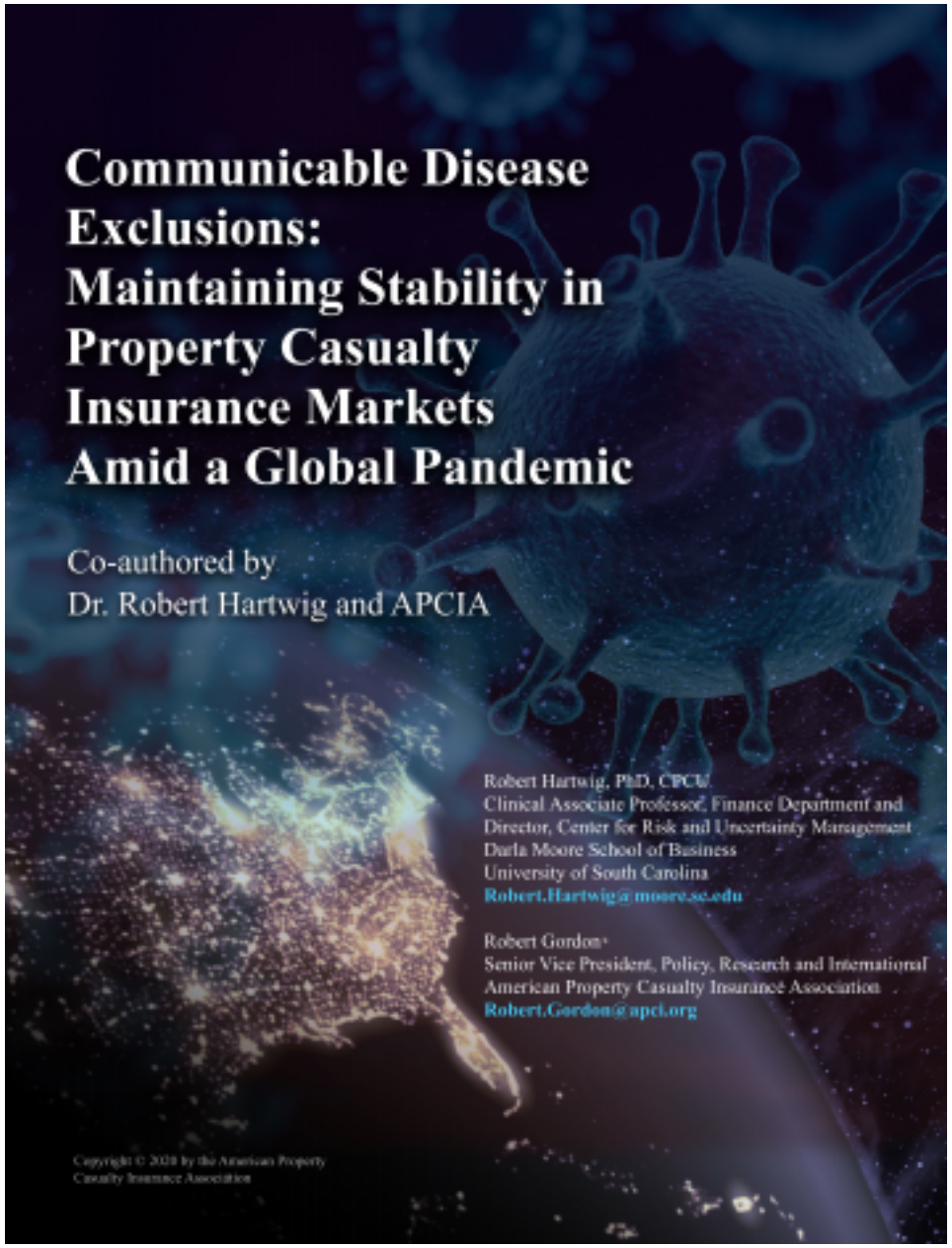
Major and Rapid Changes in the Reinsurance Markets

- **Property: COVID-19 and Concerns Over BI Are Driving Reinsurers to Exclude Communicable Disease (CD) Globally in Virtually All Property Treaties**
  - Primary insurers are running into DOI resistance to gain approvals for exclusions
  - Commercial and personal lines
  - Exclusion is all CDs, not just pandemic or epidemic
- **Casualty: Some Reinsurers Starting to Exclude CD**
  - Exclusions being driven by London market
    - GL, WC (esp. WC CAT)
  - No universal exclusion push in non-London markets (yet)
  - Not affecting financial lines yet (D&O, E&O, Fiduciary, Fidelity) or Cyber
- **Reinsurers Try to Manage Global Aggregation Risk**

These same factors are contributing to capacity issues in the retrocessional market

Paper on Communicable Disease Exclusions and Market Stability

- CD exclusions are becoming more commonplace in reinsurance treaties
- Regulators are generally not approving primary insurers filings for exclusions in underlying primary policies
- Paper addresses the global factors (e.g., accumulation risk, risk aversion, uninsurability) driving the exclusions
- Also addresses market consequences if misalignment persists



Download at: https://www.uscriskcenter.com/wp-content/uploads/2020/08/CD_Exclusion_Whitepaper-Aug-2020-No-Typo.pdf

INVESTMENTS:
THE NEW REALITY

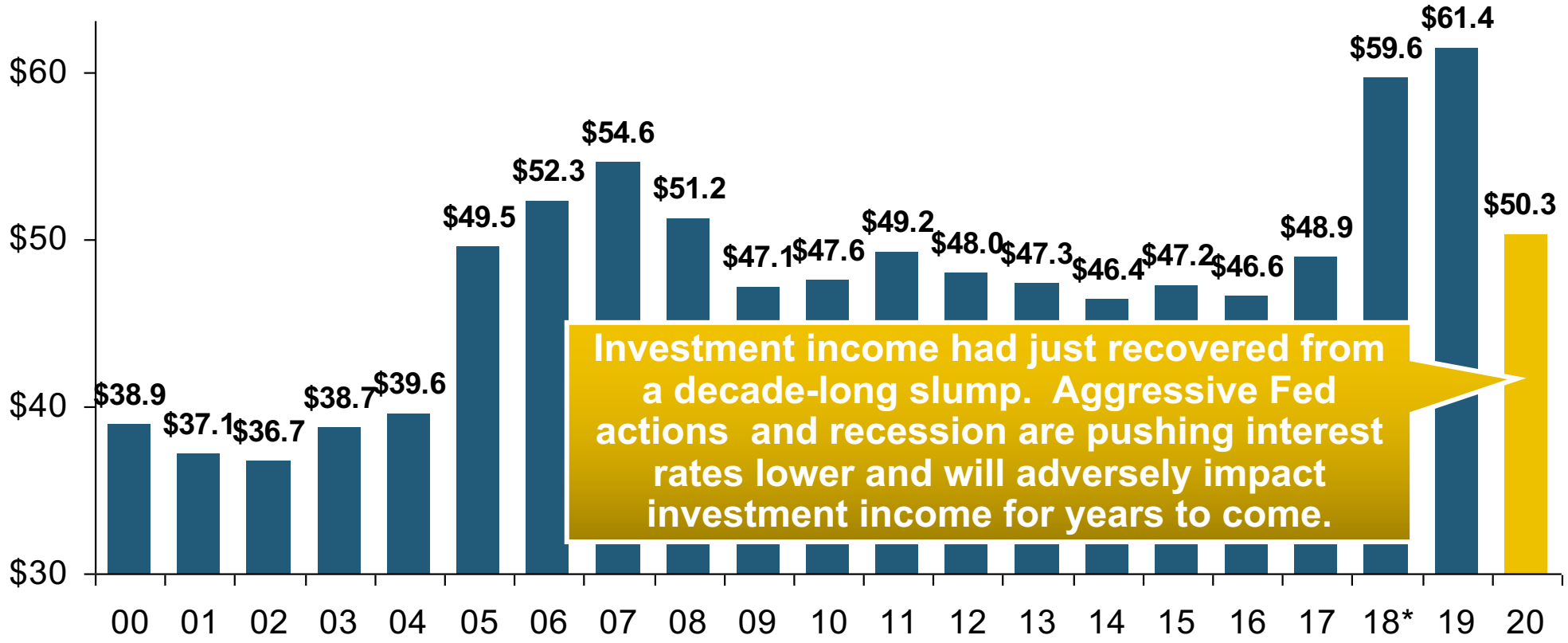
Investment Performance Is a Key Driver of Insurer Profitability

Aggressive Rate Cuts Will Adversely Impact Invest Insurer Earnings

Financial Crisis *Déjà Vu*?

Property/Casualty Insurance Industry Investment Income: 2000–2020E

($ Billions)

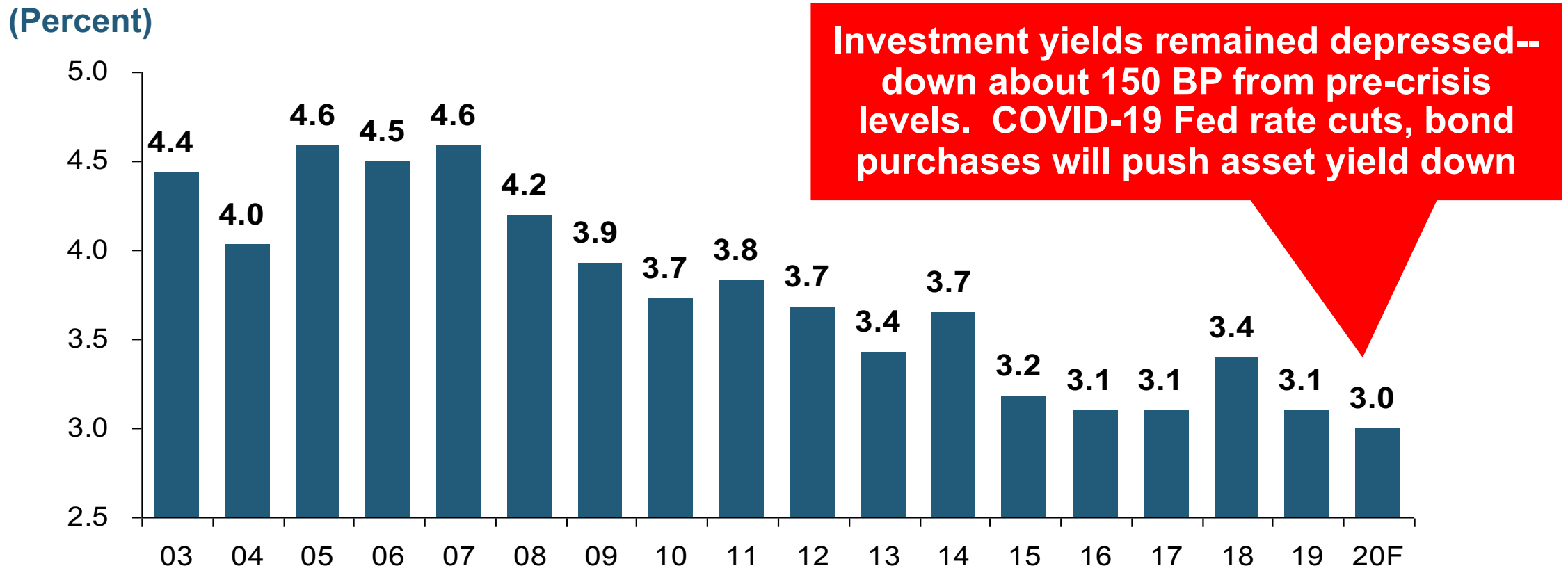


Due to persistently low interest rates, investment income remained below pre-crisis levels for a decade. Lower interest rates post-COVID will drive investment income down once again.

*2020 figure is annualized based on YTD Q3 actual of $37.7B. 2018-19 figures are distorted by provisions of the TCJA of 2017. Increase reflects such items as dividends from foreign subsidiaries.

[1] Investment gains consist primarily of interest and stock dividends. Sources: ISO; University of South Carolina, Center for Risk and Uncertainty Management.

Net Investment Yield on Property/Casualty Insurance Invested Assets, 2007–2020F*



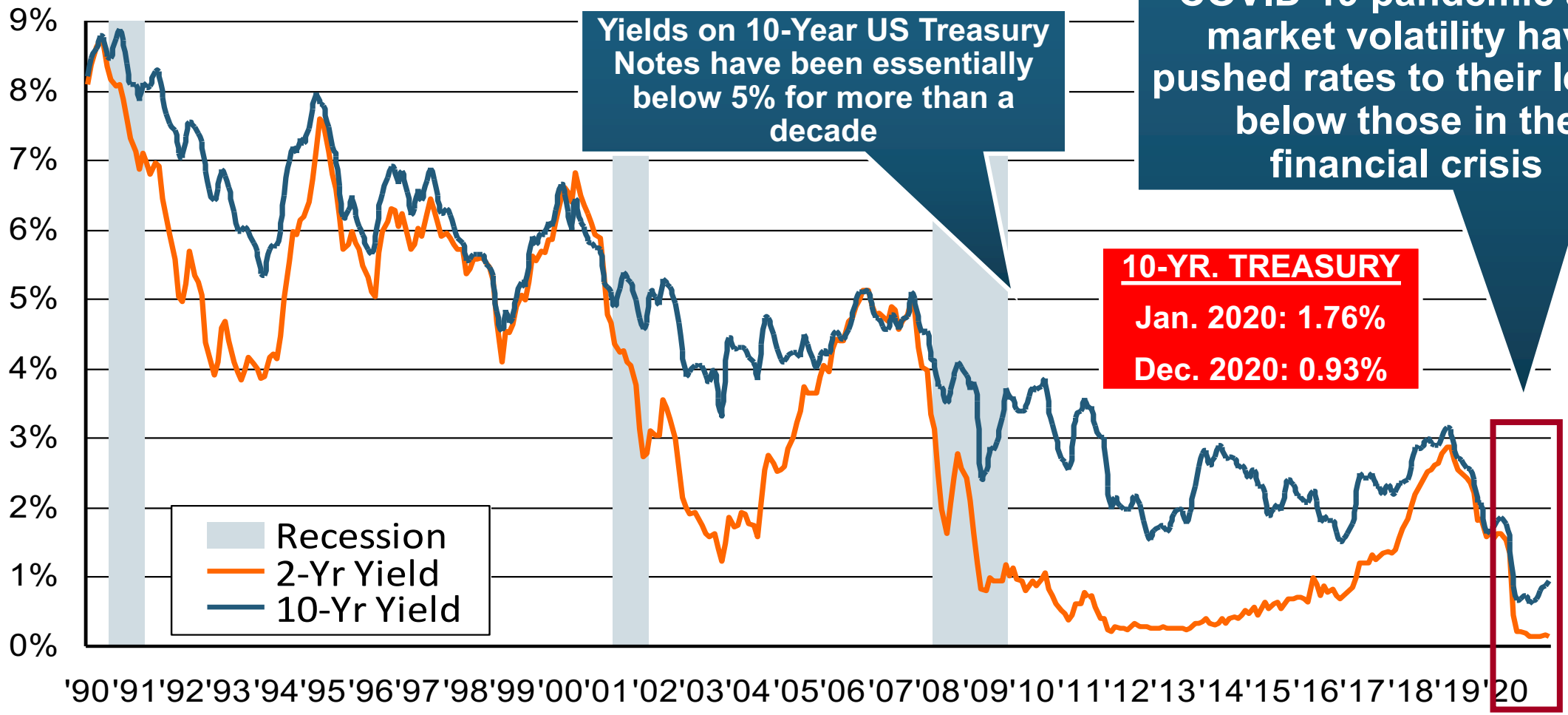
Investment yields remained depressed--down about 150 BP from pre-crisis levels. COVID-19 Fed rate cuts, bond purchases will push asset yield down

The yield on invested assets remains low relative to pre-crisis yields. Fed rate increases beginning in late 2015 through 2018 halted the slide in yields, but rate cuts in 2019/2020 will preclude future gains

Average: 1960-2019 = 4.9%
Low: 2.8% (1961)
High: 8.2% (1984/85)

Sources: NAIC data, sourced from S&P Global Market Intelligence; 2017-19 figures are from ISO. 2020F is from the Risk and Uncertainty Management Center, Univ. of South Carolina.

US Treasury Security Yields: A Long Downward Trend, 1990–2020*

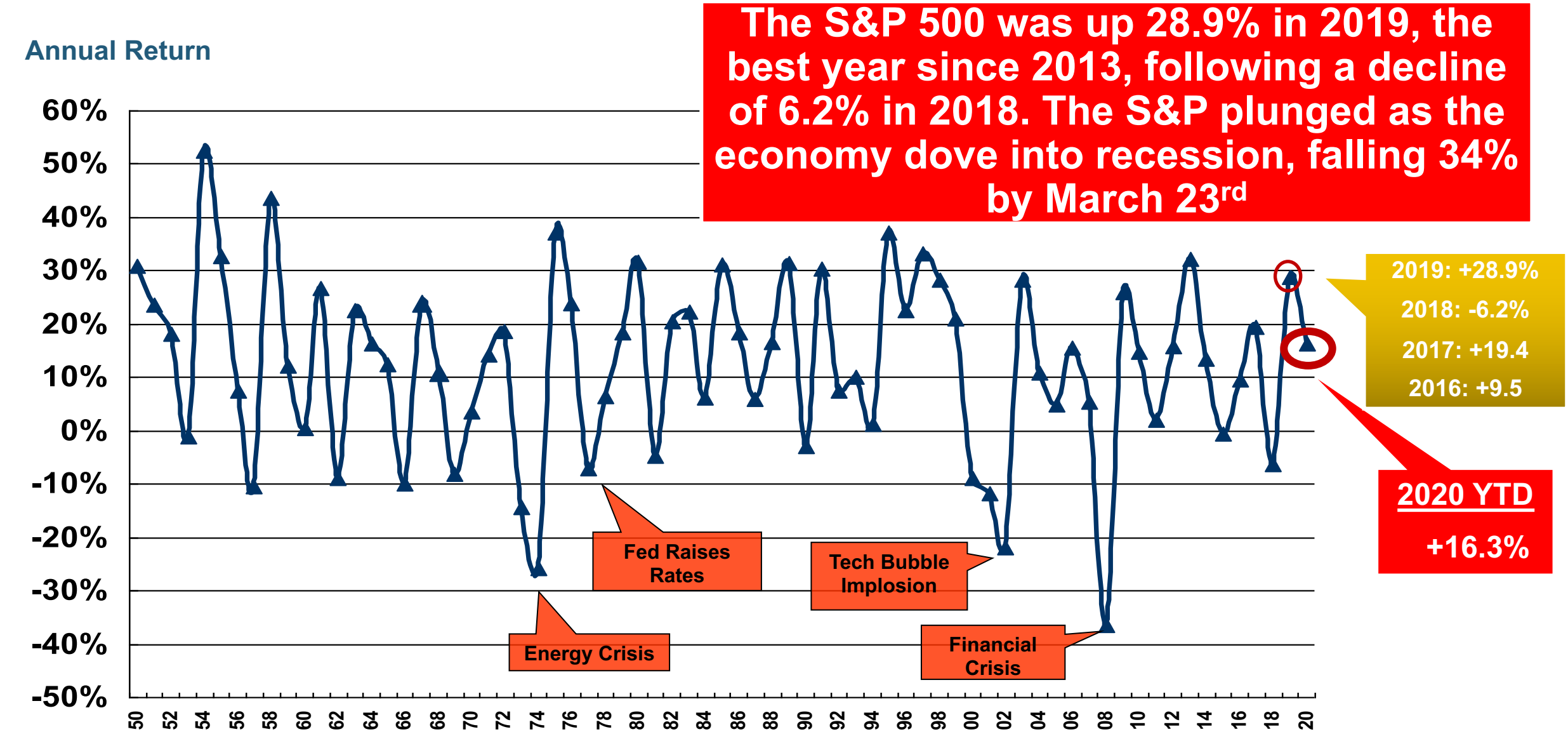


Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, most P/C insurer portfolios will have low-yielding bonds for many years to come.

*Monthly, constant maturity, nominal rates, through Dec. 2020.

Sources: Federal Reserve Bank at http://www.federalreserve.gov/releases/h15/data.htm. National Bureau of Economic Research (recession dates); Risk and Uncertainty Management Center, University of South Carolina.

S&P 500 Index Returns, 1950–2020*



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*Through Dec. 31, 2020.
Source: NYU Stern School of Business: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html; Center for Risk and Uncertainty Management, University of South Carolina

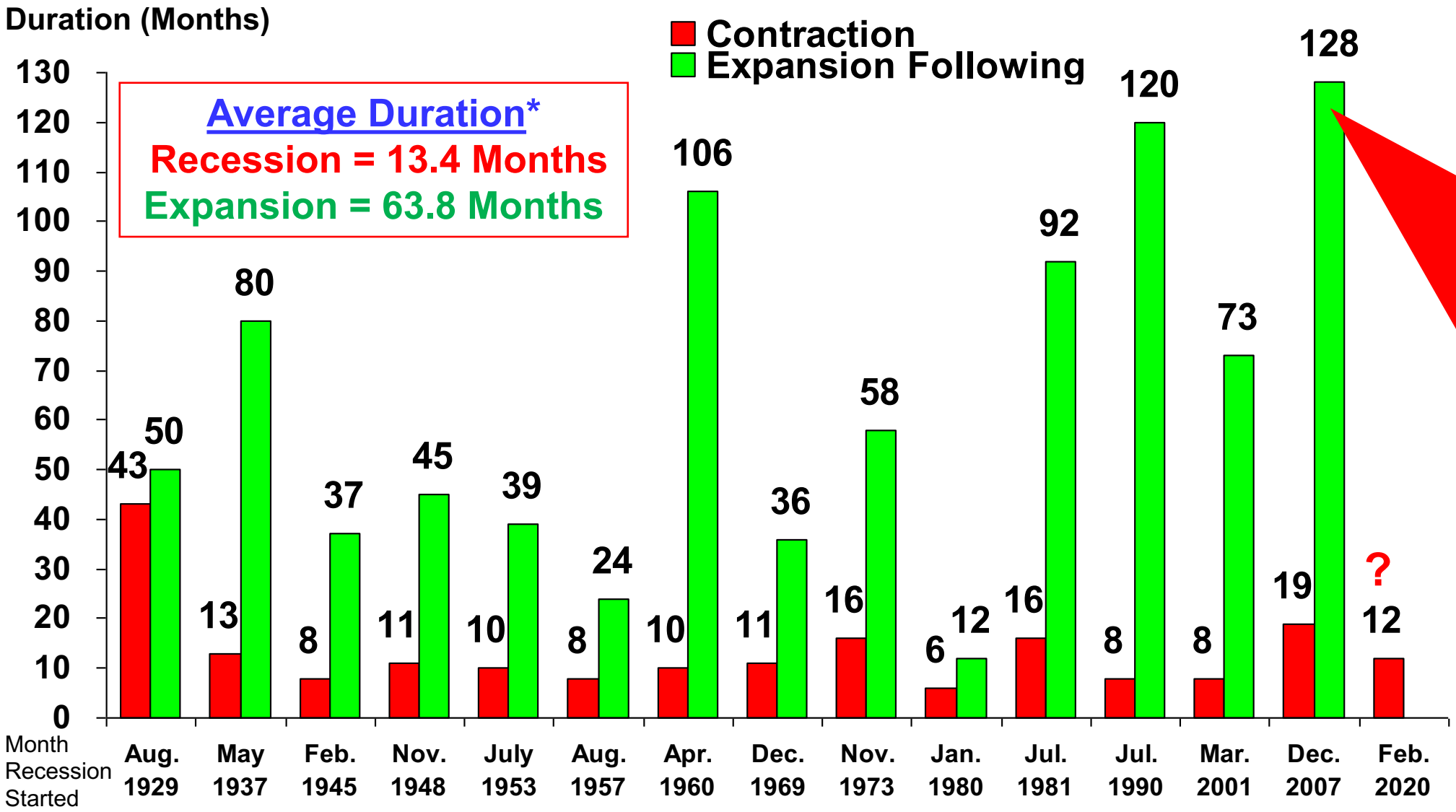
THE ECONOMY

COVID-19 Pandemic Will Directly and Severely Impact Growth As Exposure Growth Rapidly Shrinks

The Strength of the Economy Has Always Influenced Growth in Insurers' Exposure Base Across Most Lines

The Links Between the Economy and the P/C Insurance Industry Are Strengthening

Length of US Business Cycles, 1929-Present*



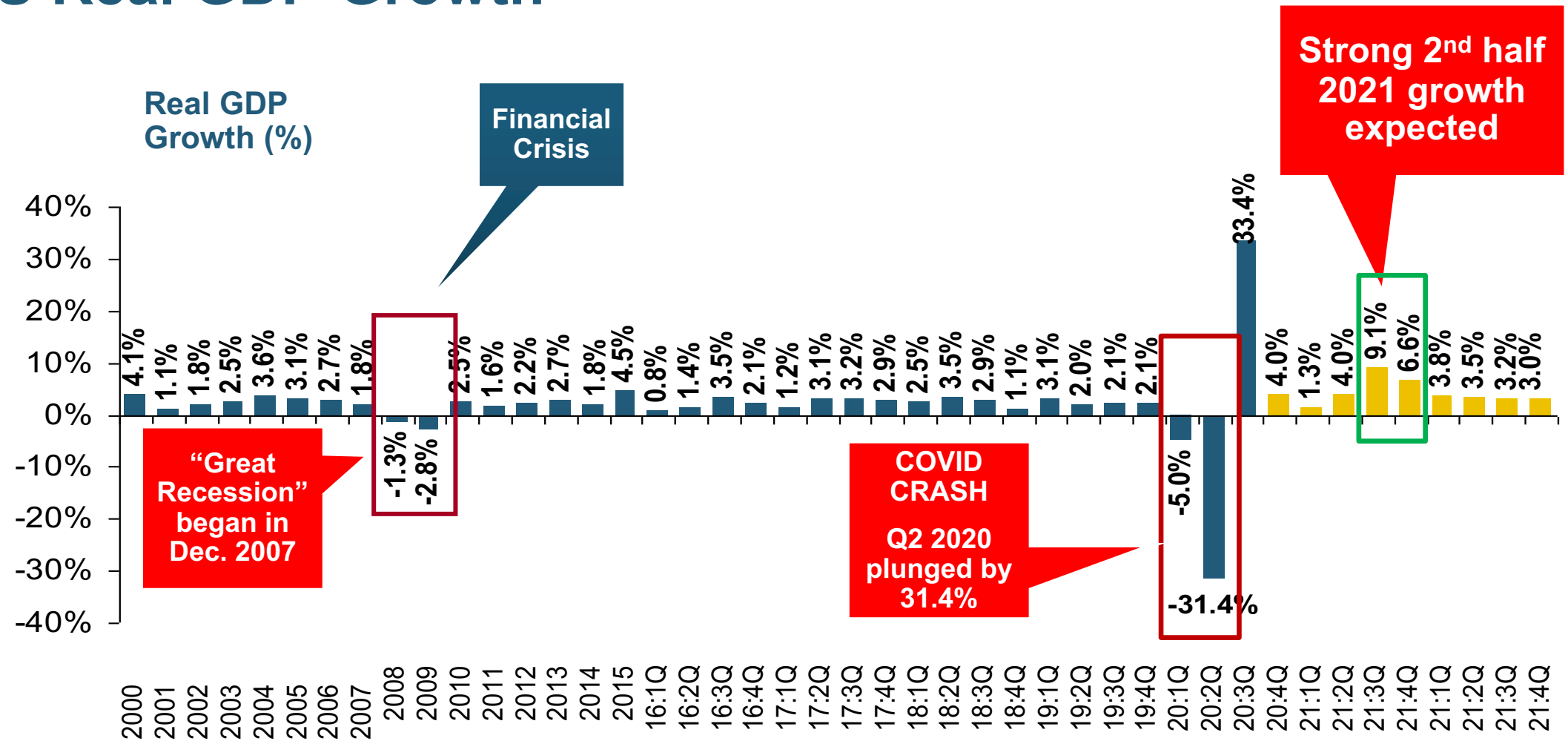
The most recent economic expansion ended in Feb. 2020 and was the longest in US history (began July 2009)

Will likely take 2+ years to recover lost growth

* As of August 2020 but excluding current COVID-19 recession which began in Feb. 2020 but with an indeterminate end.

Sources: National Bureau of Economic Research; Risk and Uncertainty Management Center, University of South Carolina.

US Real GDP Growth*



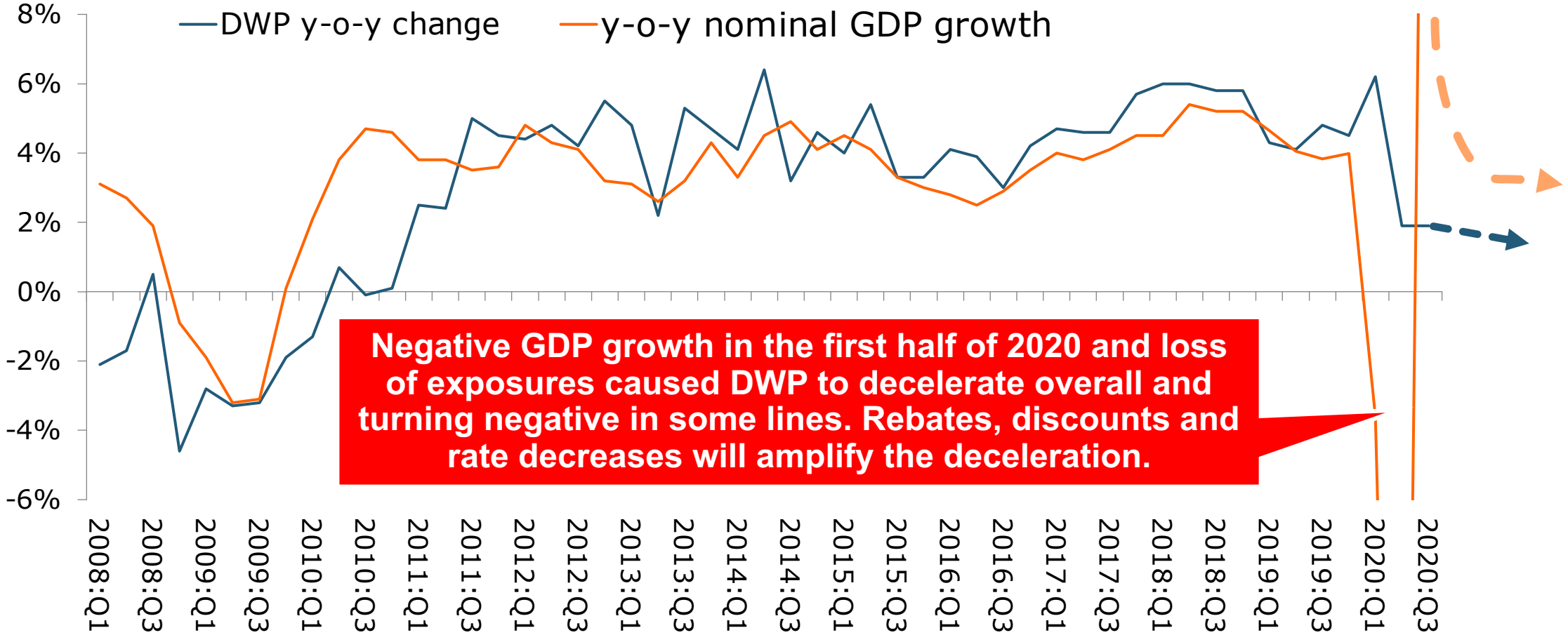
Demand for Insurance Will Be Severely Impacted As the Economy Slows but Is Expected to Improve by Late Q3 and into Q4

* Estimates/Forecasts from Wells Fargo Securities.

Source: US Department of Commerce, Wells Fargo Securities 1/21; Center for Risk and Uncertainty Management, University of South Carolina.

The Economy Drives P/C Insurance Industry Premiums: 2006:Q1–2020:Q3*

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



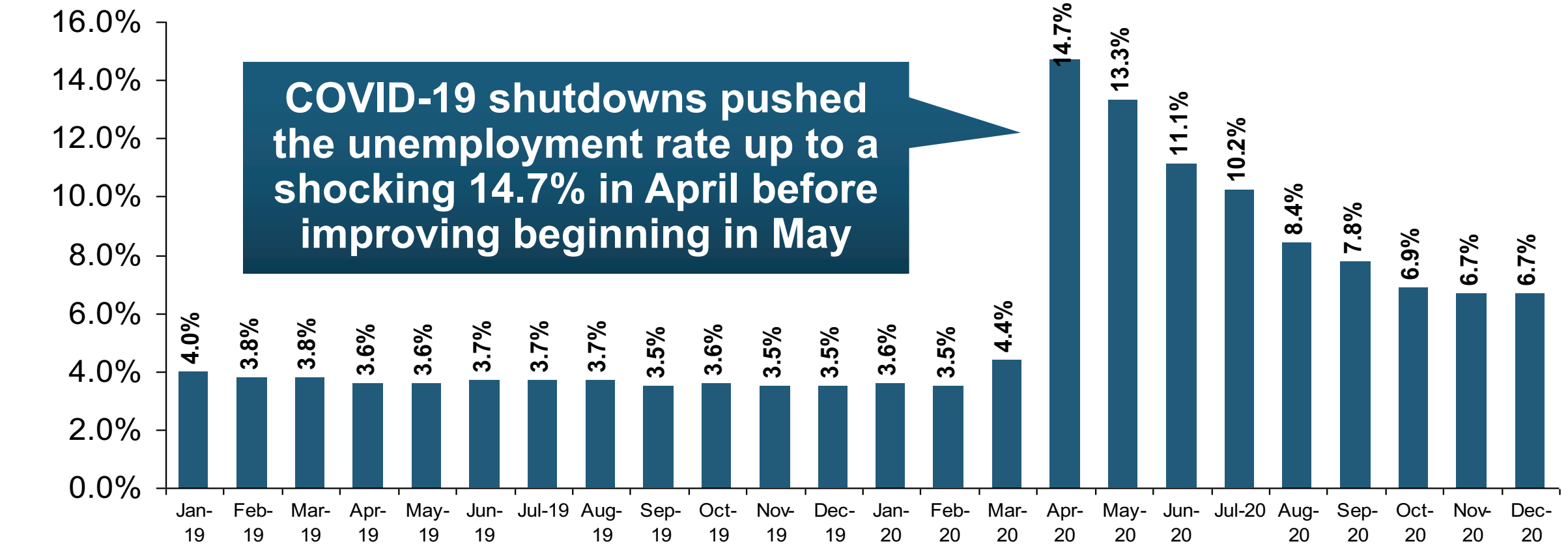
Negative GDP growth in the first half of 2020 and loss of exposures caused DWP to decelerate overall and turning negative in some lines. Rebates, discounts and rate decreases will amplify the deceleration.

Direct written premiums track nominal GDP fairly tightly over time, suggesting the P/C insurance industry's growth prospects inextricably linked to economic performance.

Sources: SNL Financial; U.S. Commerce Dept., Bureau of Economic Analysis; ISO; I.I.I.; Risk and Uncertainty Management Center, University of South Carolina.

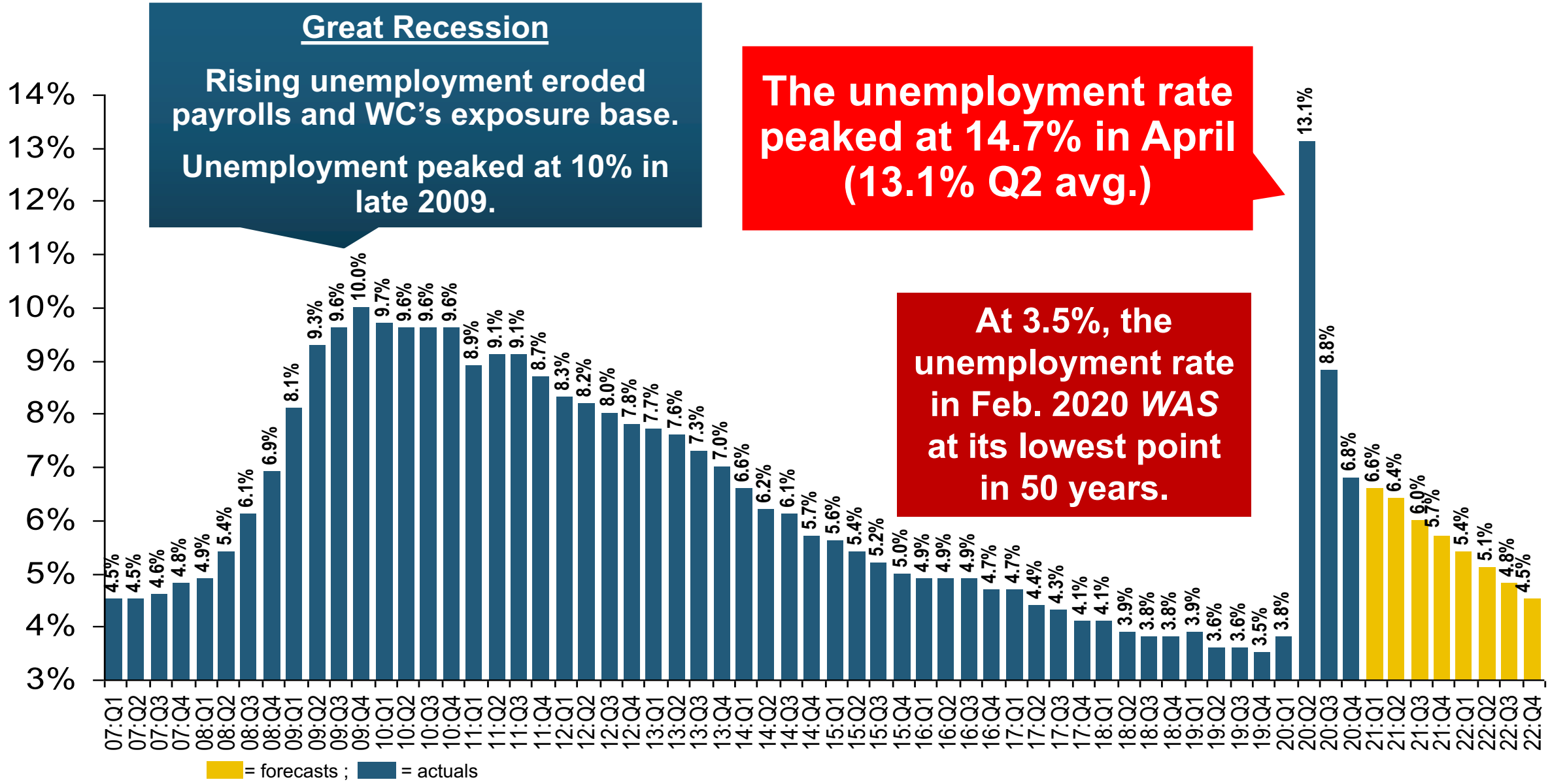
Unemployment Rate: Jan. 2019 – Dec. 2020

12.4M jobs were created from May through Sept. (after a loss of 22.2M in March/April) helping bring down the unemployment rate to 6.7% from its April peak of 14.7%. So far, ~56% of jobs lost have been recovered. Employment in Dec. 2020 was 6.5% below Feb. 2020.



Source: US Bureau of Labor Statistics; Risk and Uncertainty Management Center, University of South Carolina.

US Unemployment Rate Forecast: 2007:Q1–2022:Q4



Sources: US Bureau of Labor Statistics; Wells Fargo Securities (1/21 edition); Risk and Uncertainty Management Center, University of South Carolina.

Commercial Lines Growth, Underwriting Performance & Pricing Cyclicality

Pricing Pressures Are Intensifying

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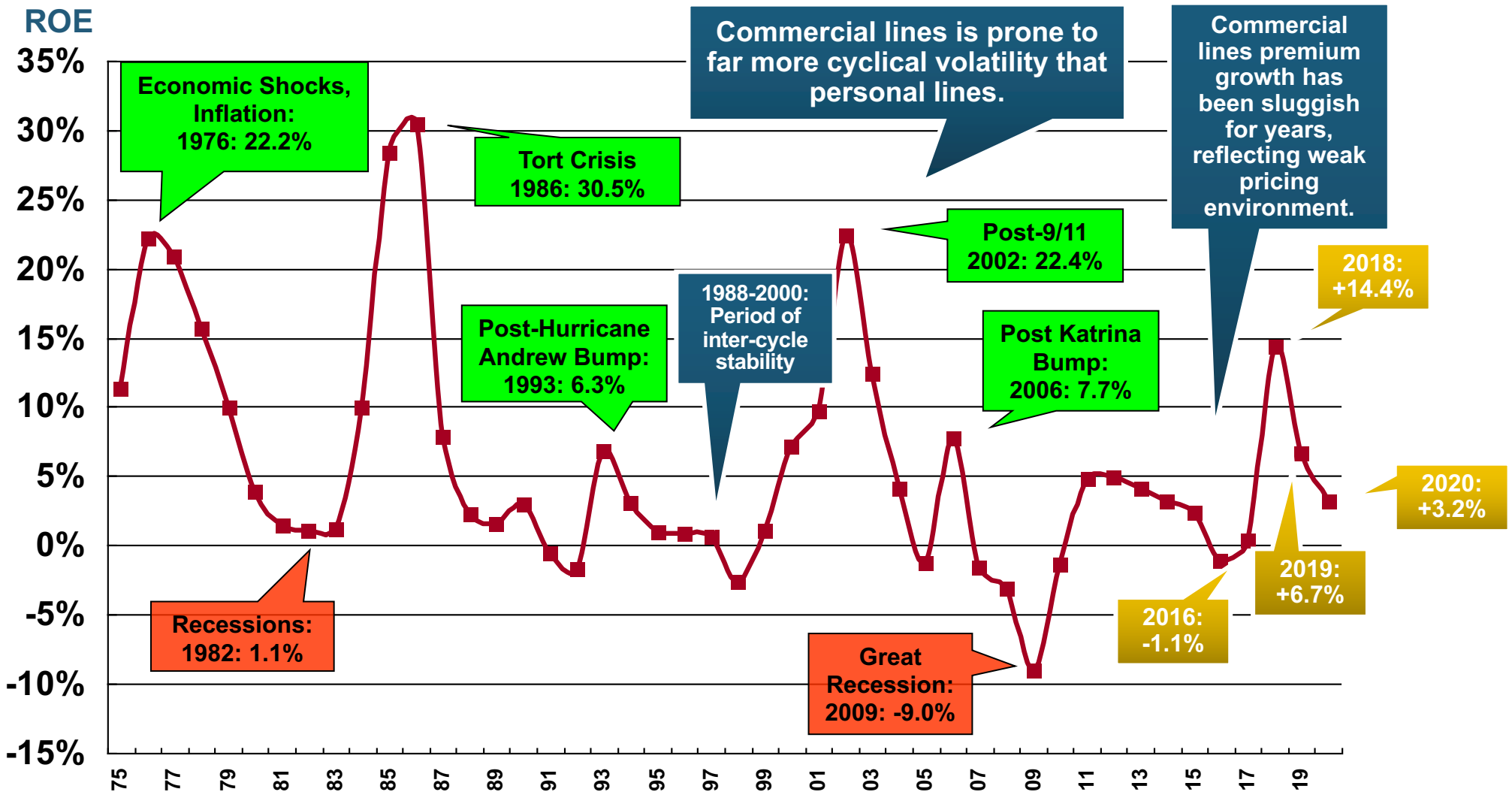
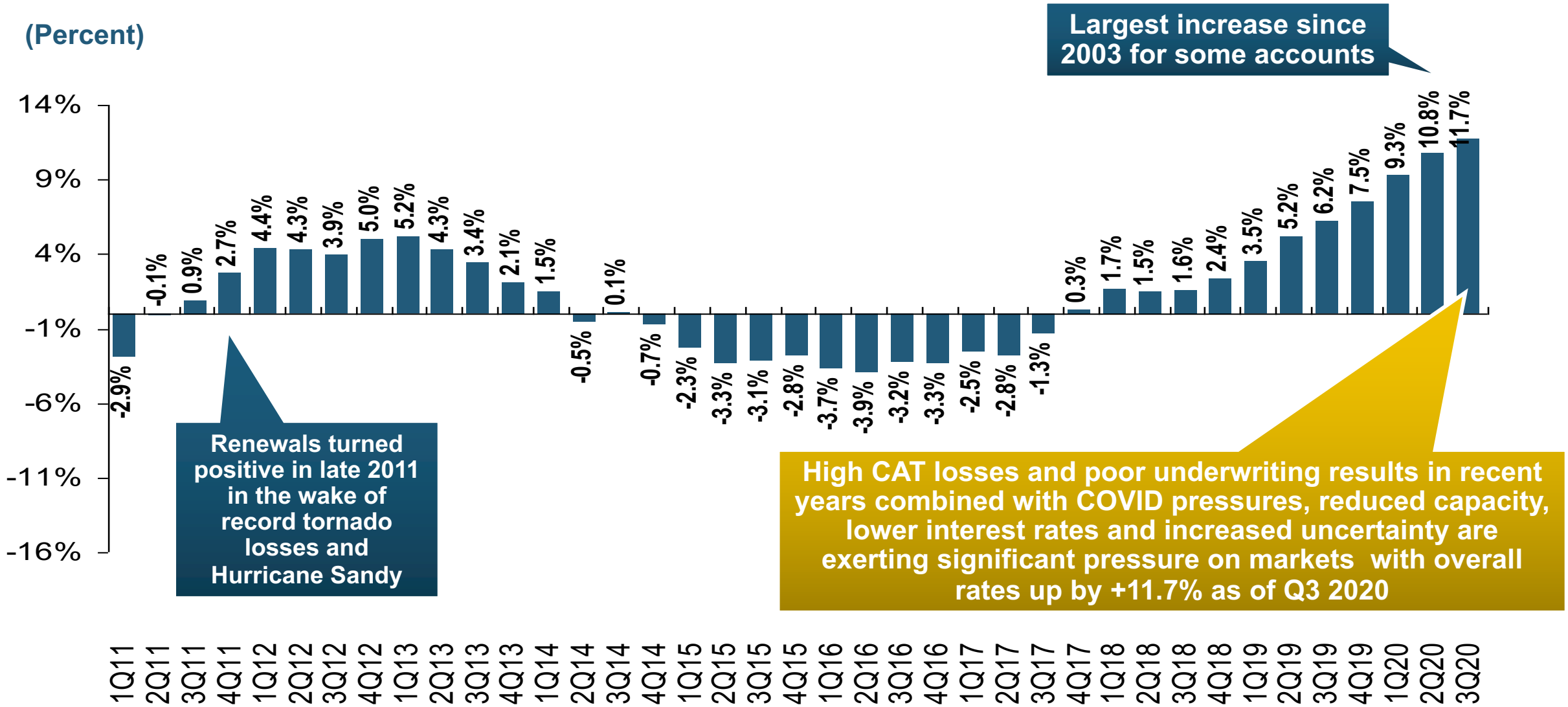
Commercial Lines NPW Premium Growth: 1975 – 2020E



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

CIAB: Average Commercial Rate Change, All Lines, 2011:Q1–2020:Q3*

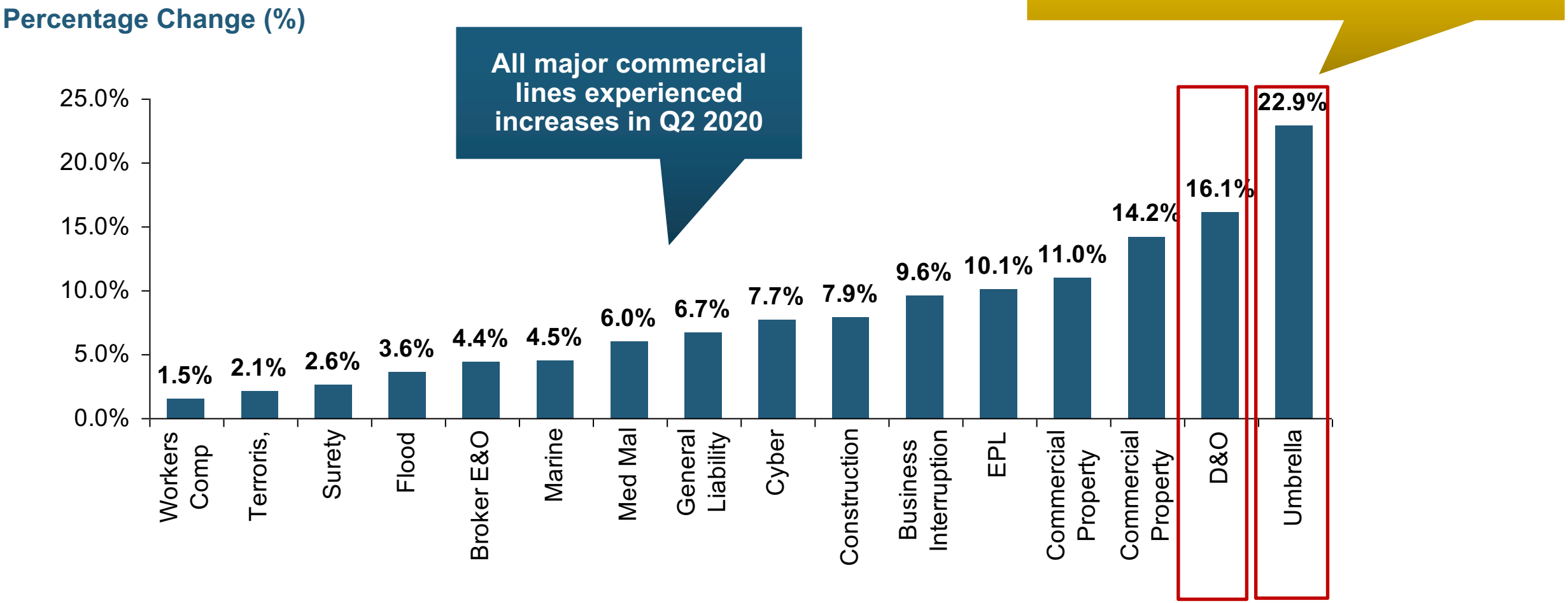


*Latest available.
Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
Source: Council of Insurance Agents & Brokers; Center for Risk and Uncertainty Management, Univ. of South Carolina.

Change in Commercial Rate Renewals, by Line: 2020:Q3

Umbrella now leads all major commercial lines in terms of rate gains, exceeding D&O and CP

All major commercial lines experienced increases in Q2 2020



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.

COVID-19 Litigation Trends

Court Decisions Have Largely Favored Insurers, but Concerns Remain

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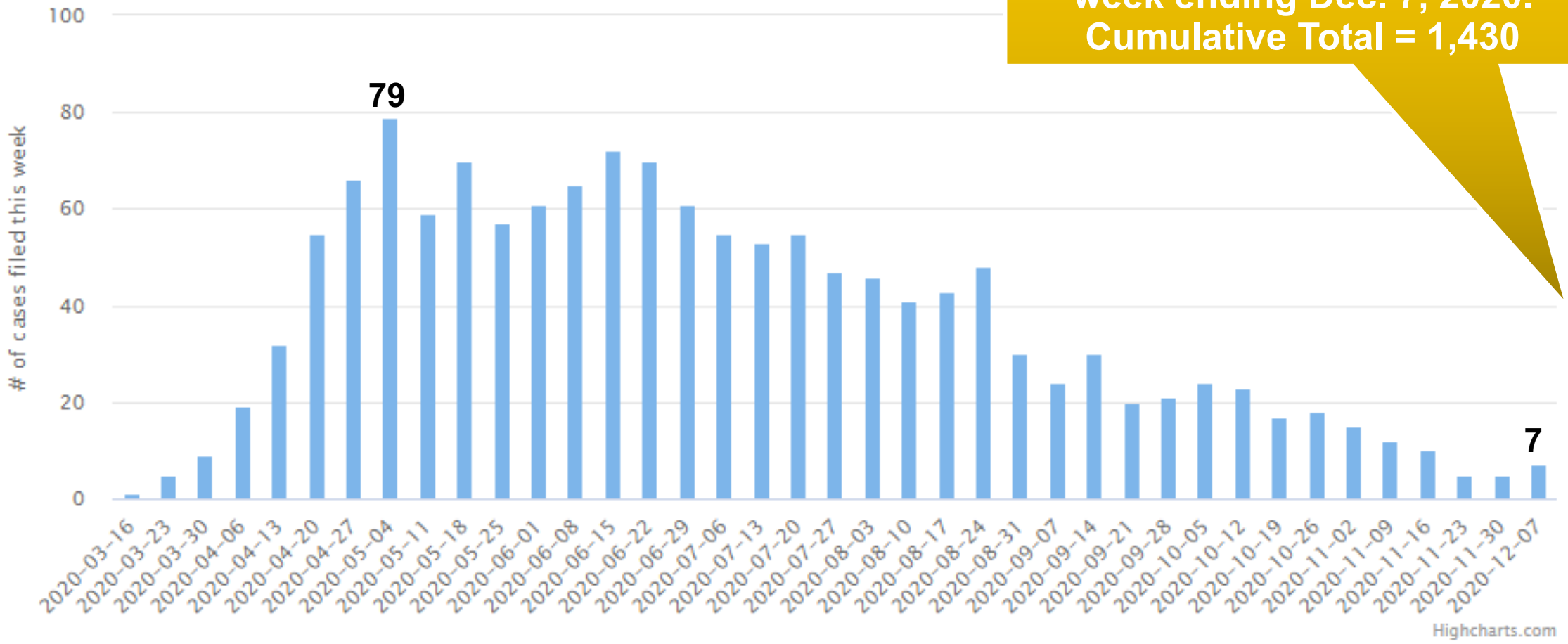
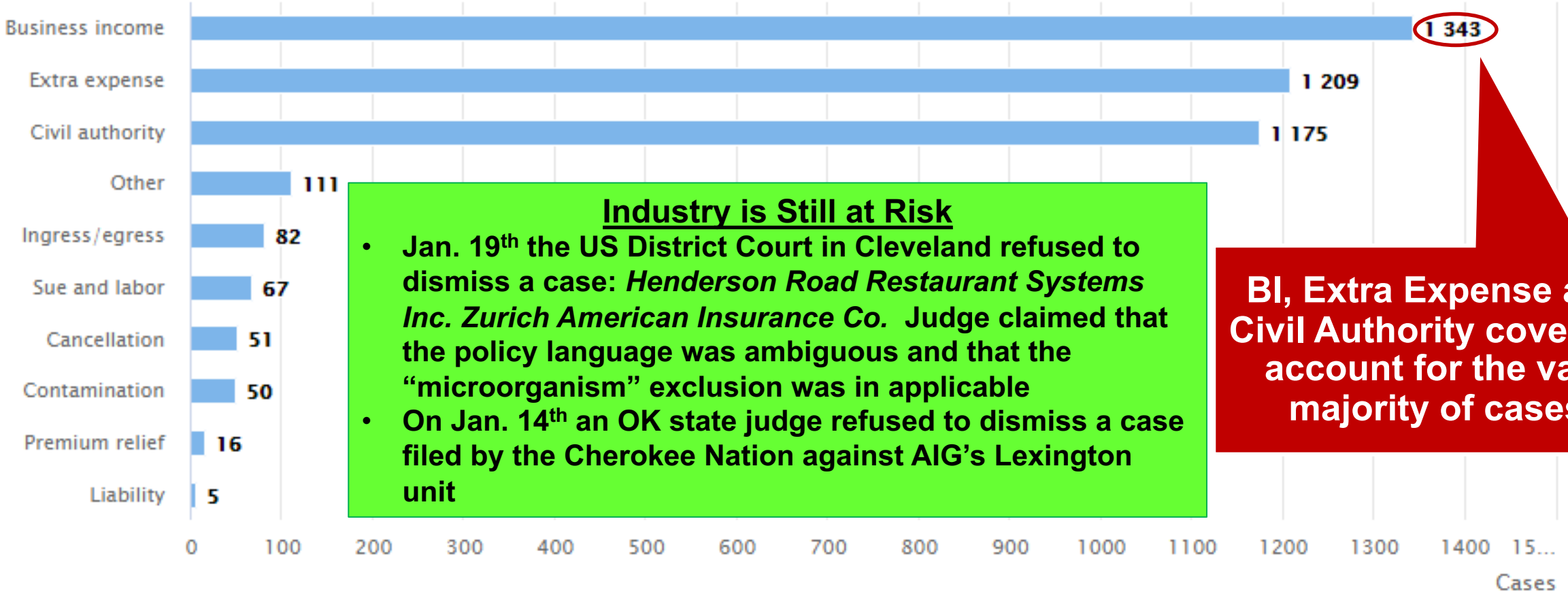
Weekly Number of COVID-Related Lawsuits Filed:
(Weeks Ending Mar. 16, 2020 to Dec. 7, 2020) [Latest Available]

The number of new cases filed is declining with just 7 filed the week ending Dec. 7, 2020. Cumulative Total = 1,430



Source: Covid Coverage Litigation Tracker, University of Pennsylvania School of Law. Accessed 1/21/21 at: https://cclt.law.upenn.edu

Coverage Sought in COVID-Related Lawsuits:
(Total through Dec. 7, 2020) [Latest Available]



Industry is Still at Risk

- **Jan. 19th the US District Court in Cleveland refused to dismiss a case: *Henderson Road Restaurant Systems Inc. Zurich American Insurance Co.* Judge claimed that the policy language was ambiguous and that the "microorganism" exclusion was in applicable**
- **On Jan. 14th an OK state judge refused to dismiss a case filed by the Cherokee Nation against AIG's Lexington unit**

BI, Extra Expense and Civil Authority coverage account for the vast majority of cases

Source: Covid Coverage Litigation Tracker, University of Pennsylvania School of Law. Accessed 1/21/21 at: https://cclt.law.upenn.edu

SUMMARY

- The P/C Insurance Industry Remains Strong, Stable, Sound and Secure
- Worst-Case Scenarios Have, So Far, Been Averted
- An Anticipated Acceleration in the Economic Recovery in the Second Half of 2021 Should Help Restore Most P/C Exposures to Pre-Pandemic Levels by mid-2022
- Asset Price Volatility Will Persist and Low Interest Rates Will Pressure Investment Earnings for Years
- COVID-19 Exposures Are Manageable with Headline Risk on BI and WC Issues

UNIVERSITY OF
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Thank you for your time and your attention!

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Download at www.uscriskcenter.com