

January 1, 2021 Pure Premium Rate Filing Summary of Actuarial Committee Recommendations

August 12, 2020

Governing Committee Meeting



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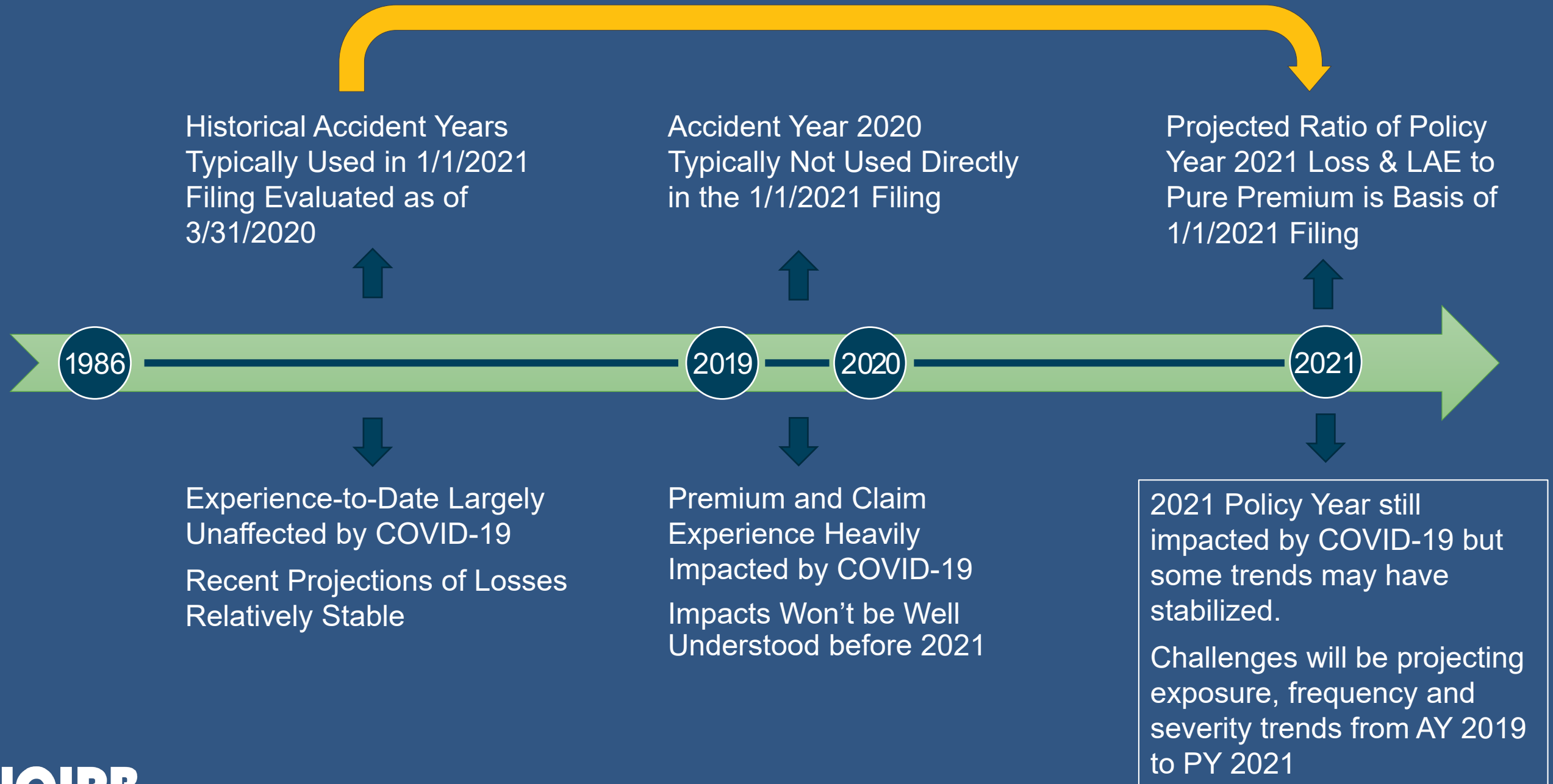
Actuarial Committee Review

March 31, 2020 Experience

Key Considerations
Pre-Pandemic Development & Claim Settlement Trends Moderating
Impact of Economic Slowdown
Severity Growth Projections
COVID-19 Claim Cost Projection

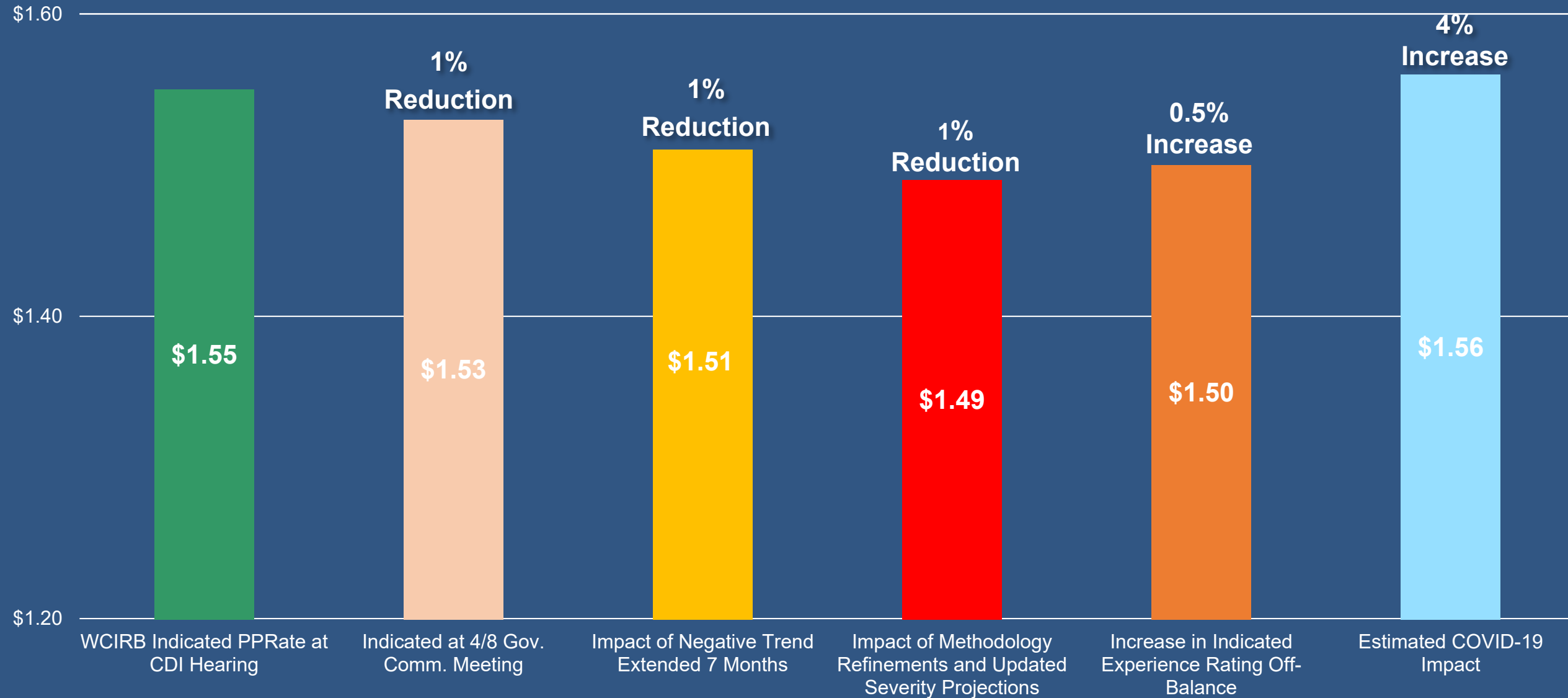
- Recommended Methodologies Generally Consistent with 1/1/2020 Filing
- Includes Adjustments to Long-Term Loss Development and ALAE Development for Claim Settlement Acceleration
- 1/1/2021 Indicated Average Pure Premium Rate: \$1.56 (\$1.50 excluding COVID-19 claim projection)
- 1/1/2020 Indicated Average Pure Premium Rate: \$1.55 (reflects 6/30/2019 experience)
- 1/1/2020 Average Approved Pure Premium Rate: \$1.52
- 1/1/2021 Indicated Advisory Pure Premium Rate Change: +2.6%
- New Telecommuting Classification: Review of Proposed Advisory Pure Premium Rate

January 1, 2021 Pure Premium Rate Filing



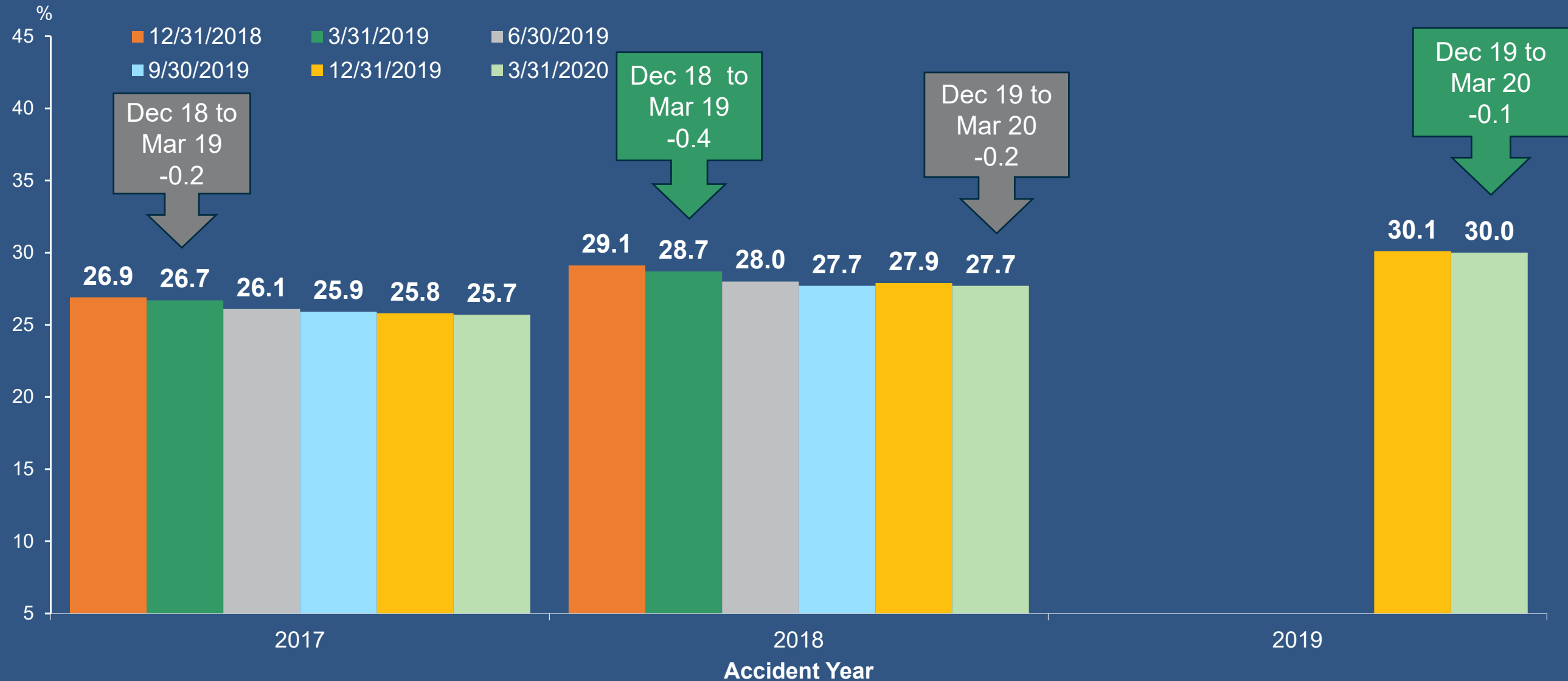
Drivers of Actuarial Committee Recommendation Indicated January 1, 2021 Advisory Pure Premium Rates

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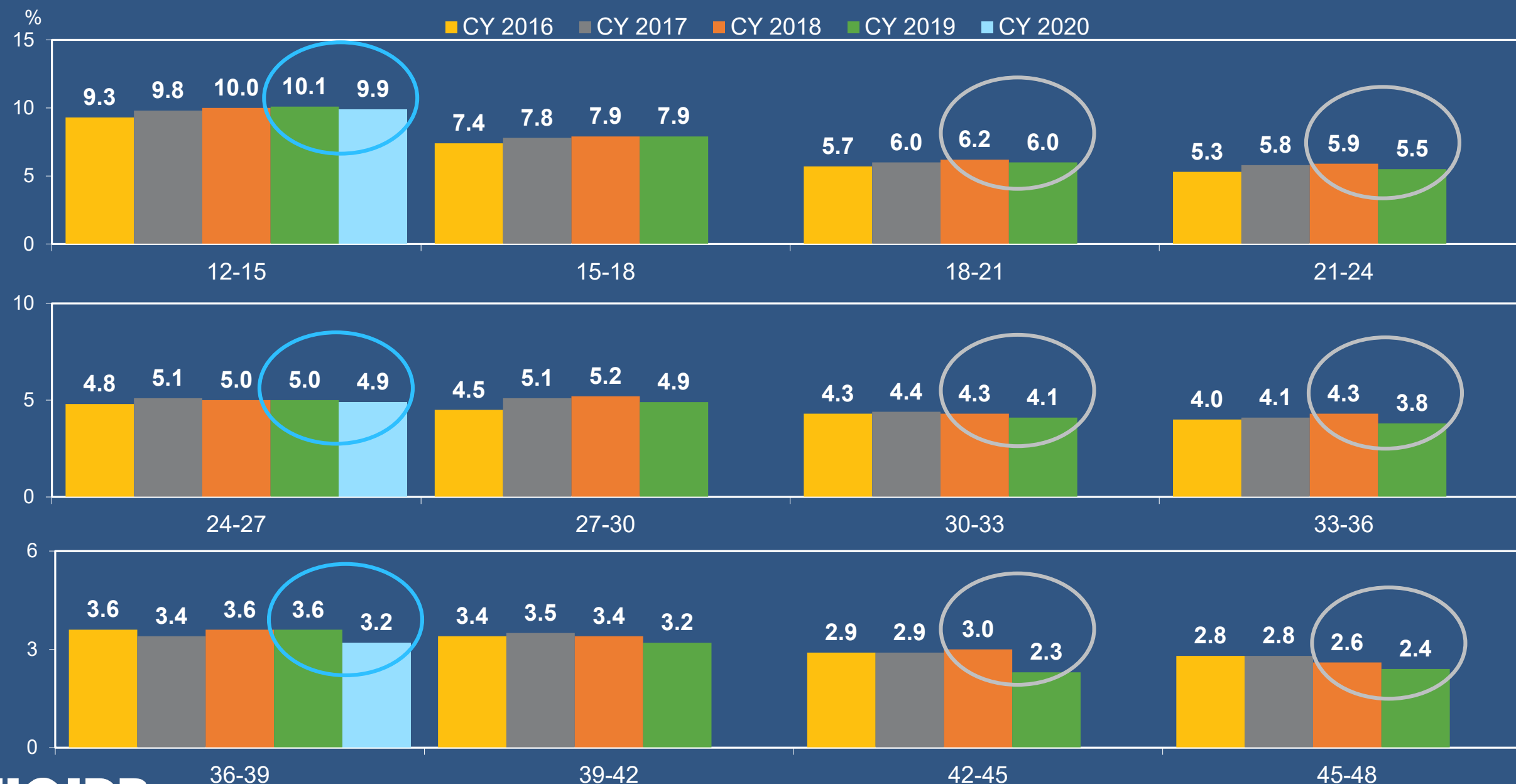
Development and Claim Settlement Trends Moderating Projected Ultimate Medical Loss Ratios

As of March 31, 2020



Development and Claim Settlement Trends Moderating Incremental Indemnity Claim Settlement Ratios

As of March 31, 2020



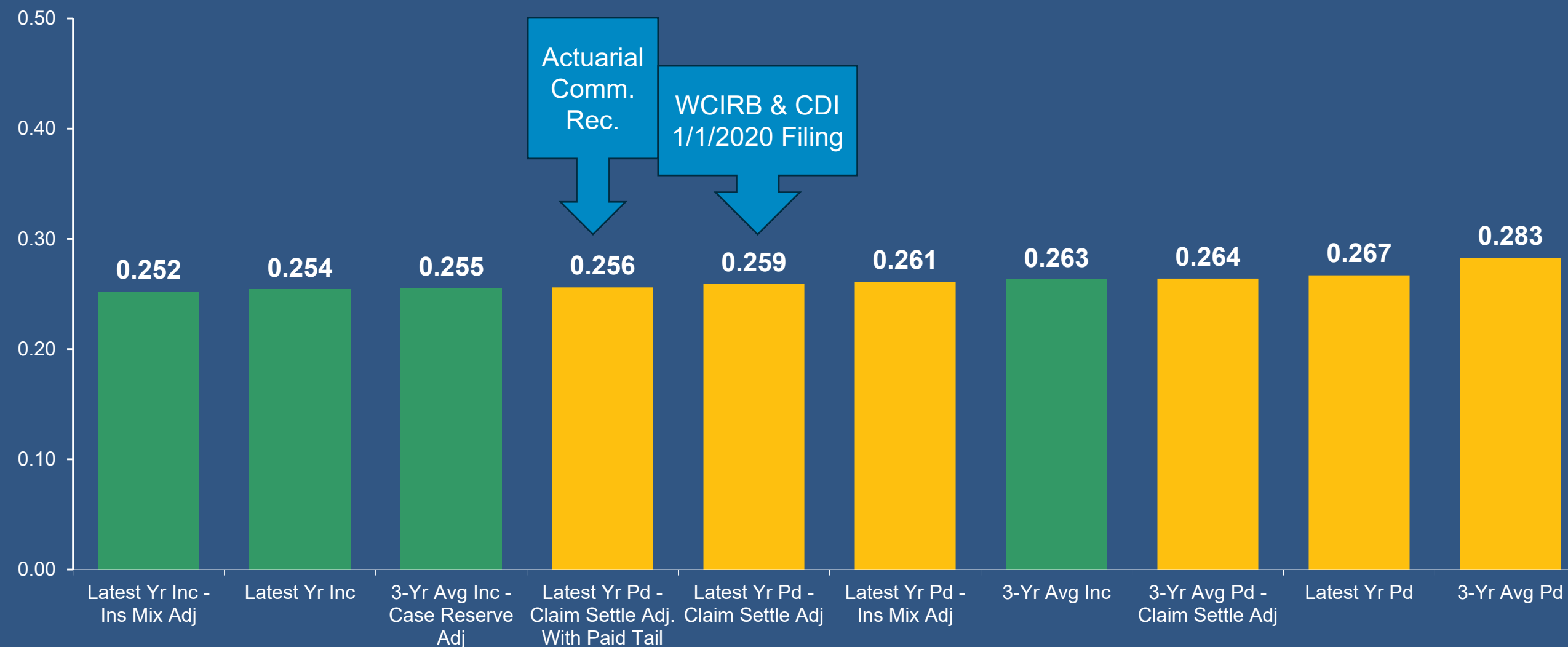
Loss Development Methodology

Basis of Actuarial Committee Recommendation

- Reform & Claim Settlement-Adjusted Paid
 - Paid development has recently been more stable and accurate
 - Paid development has historically been more consistent across insurers than incurred development
 - Includes adjustment to medical for SB 1160 reduction in lien filings and impact of reduction in pharmaceutical costs
 - Includes adjustment to long-term paid development to reflect declining settlement rates
- March 31, 2020 experience emerging consistent with prior quarters and projections
 - Stay-at-home orders did not begin until late March
 - Services performed in late March typically not paid until subsequent quarters
- Experience for the remainder of 2020 likely distorted by stay-at-home period and other COVID-19 issues
- Post-3/31/2020 loss development for claims open in 2020 likely significantly impacted
- Actuarial Committee Vote
 - Indemnity: **Unanimous support**
 - Medical: **7** in Favor – **1** Opposed, **1** Abstention
 - Committee member opposed supports applying 50% weight to adjusted incurred method for medical
 - Committee member abstaining indicated some concern with adjustment to loss development tail

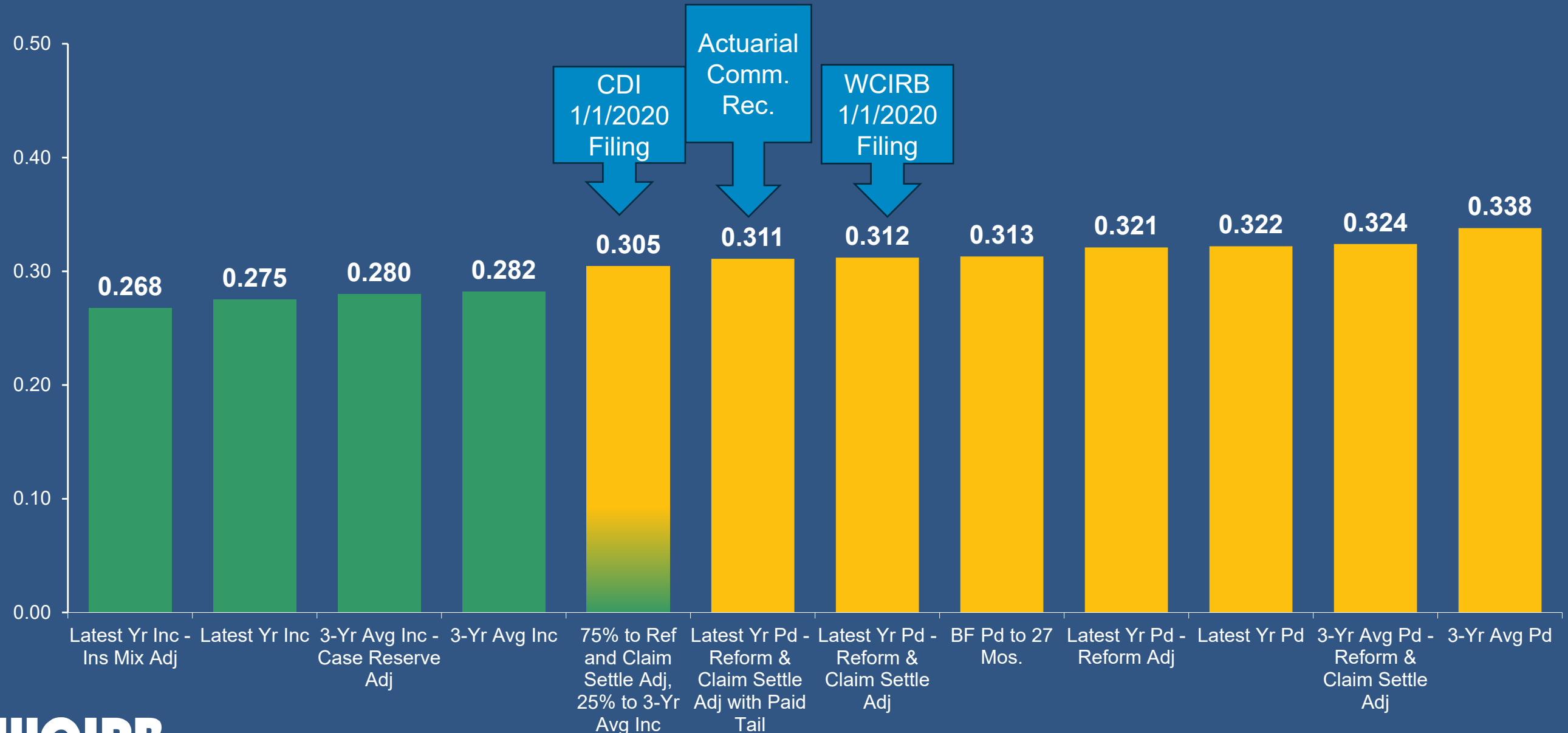
Projected Indemnity On-Level Loss Ratios under Alternative Development Methods

As of March 31, 2020



Projected Medical On-Level Loss Ratios under Alternative Development Methods

As of March 31, 2020



Trending Methodology

Basis of Actuarial Committee Recommendation

- Wage inflation adjusted to reflect current economic impact
- Separate Frequency and Severity Trend Projections Applied to the Average of the Latest Two Accident Years
 - Retrospective tests show method performs better during periods of transition
 - Allows for separate assumptions and actuarial judgment about future frequency and severity trends
 - Wage projection adjusted for shifting mix of high and low wage workers
 - Frequency projection adjusted for impact of economic downturn and prior recessions' impact on proportion of cumulative trauma claims
 - Slowdown in medical services will likely impact severities
 - Severity growth projections increased moderately given economic and claim-related pandemic effects
- Actuarial Committee Vote
 - Indemnity: **8** in Favor – **1** Abstention
 - Committee member abstaining has different approach in projecting future indemnity severity growth
 - Medical: **8** in Favor – **1** Opposed
 - Committee member opposed supports a lower medical severity growth projection
- High Uncertainty as to COVID-19 Impact on Frequency, Severity and Wage Growth Forecasts

Impact of Economic Slowdown

Average Wage Forecasts

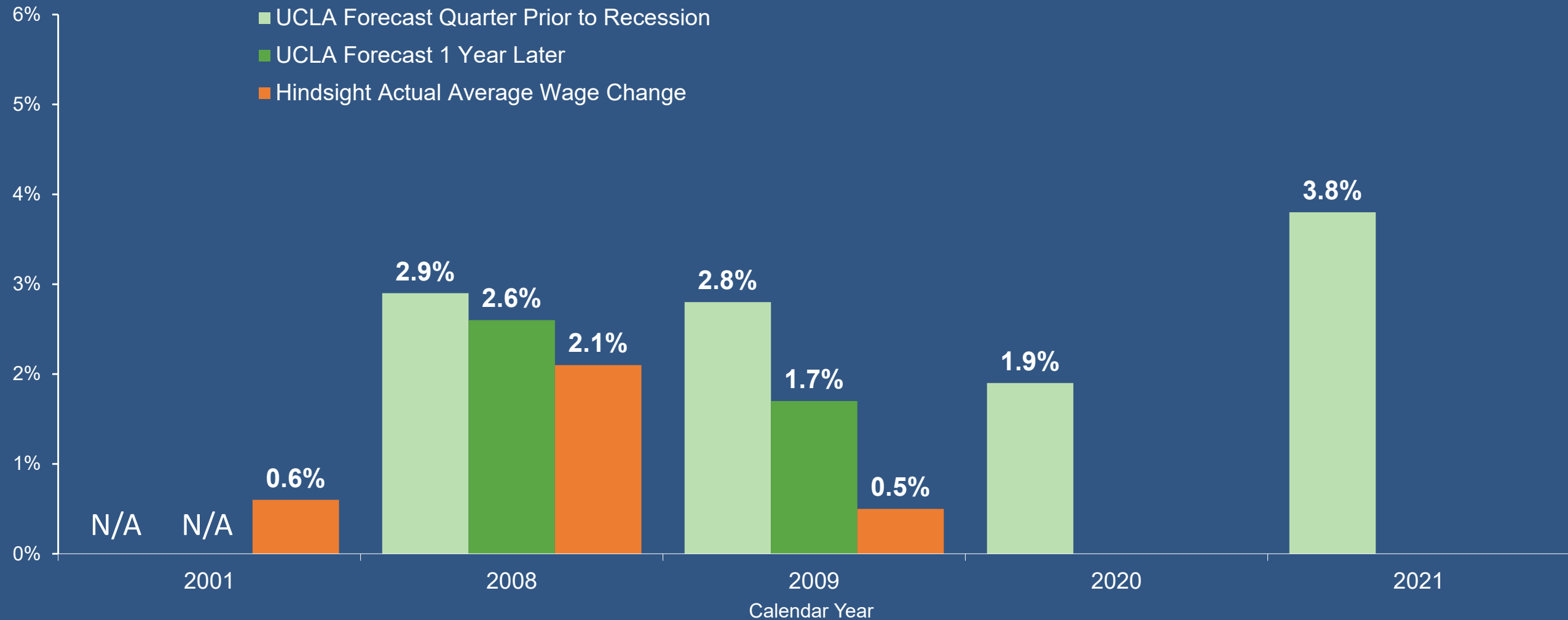
- Current forecasts of average wage changes are from March 2020 UCLA and April 2020 Department of Finance
 - Average wage forecast is not included in the June 2020 UCLA forecast

2020	2021	2022
1.5%	2.6%	3.8%

- Considerations
 - No updated UCLA forecast for June
 - Wage forecasts are not adjusted for changing industrial mix
 - Relatively greater loss of lower wage employment
 - Past forecasts have overstated wage inflation in prior recessions
- Actuarial Committee recommendation: Reduce 2020 forecast by 0.8% based on past recessionary differences between mean and median wage growth

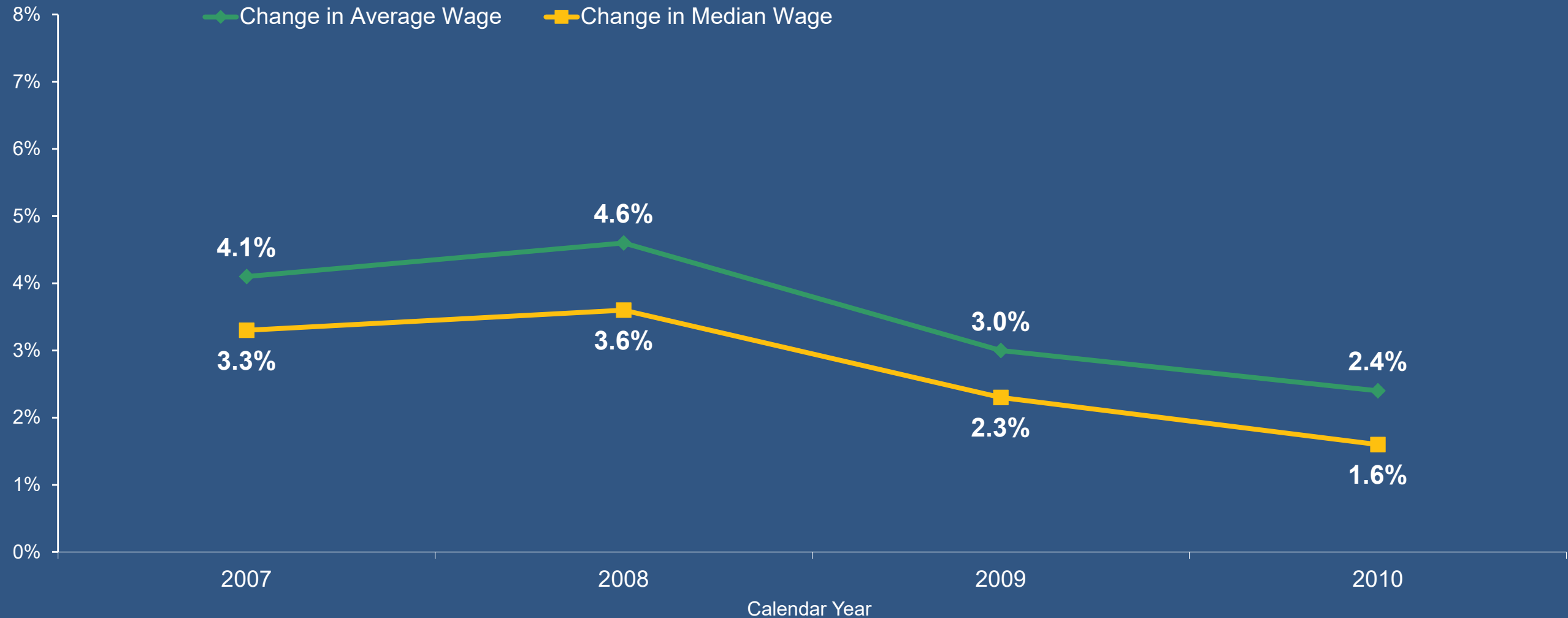
Impact of Economic Slowdown

Comparison of Recession Year Wage Forecasts



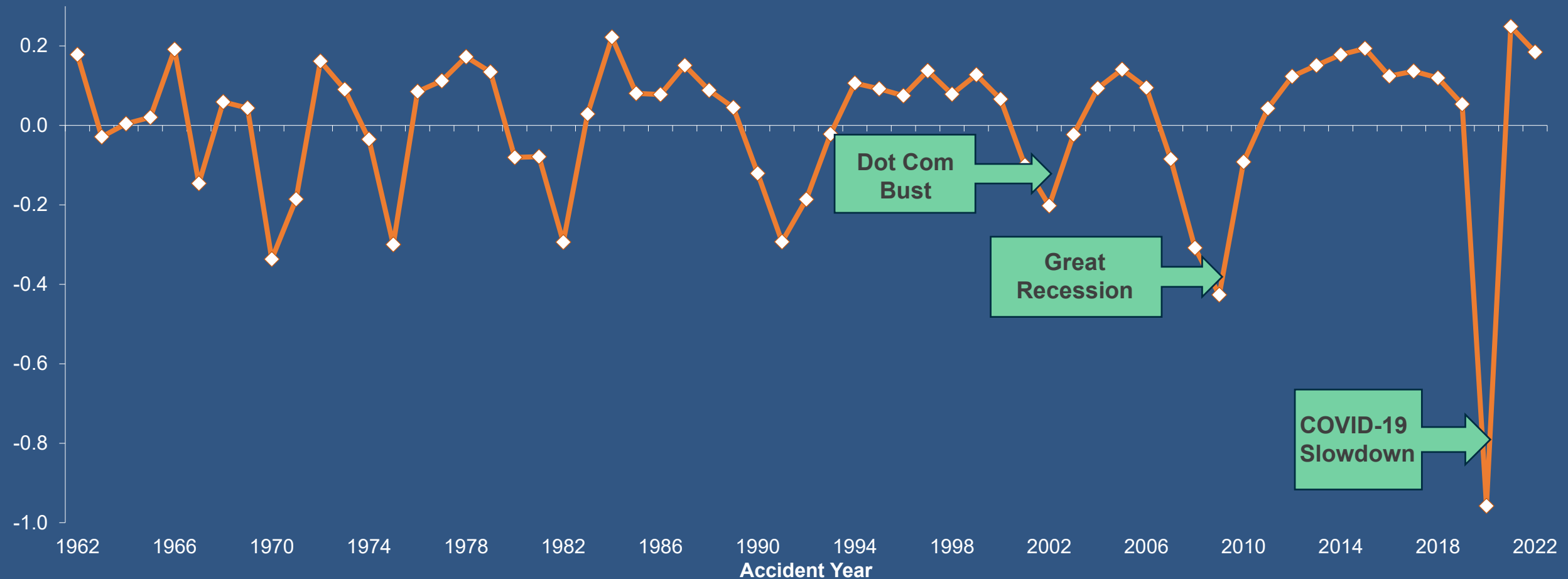
Impact of Economic Slowdown

Change in Average and Median Wage during Great Recession

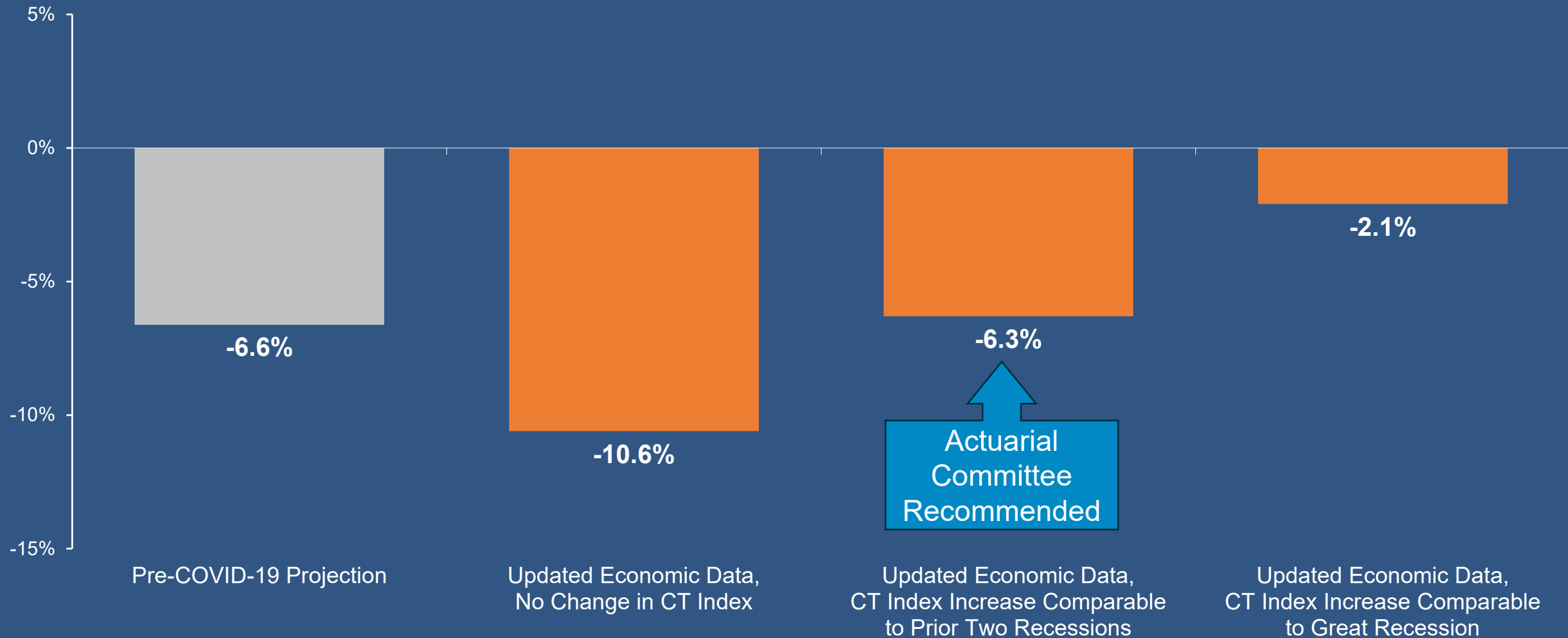


Impact of Economic Slowdown

Change in Economic Variables in WCIRB Frequency Projection

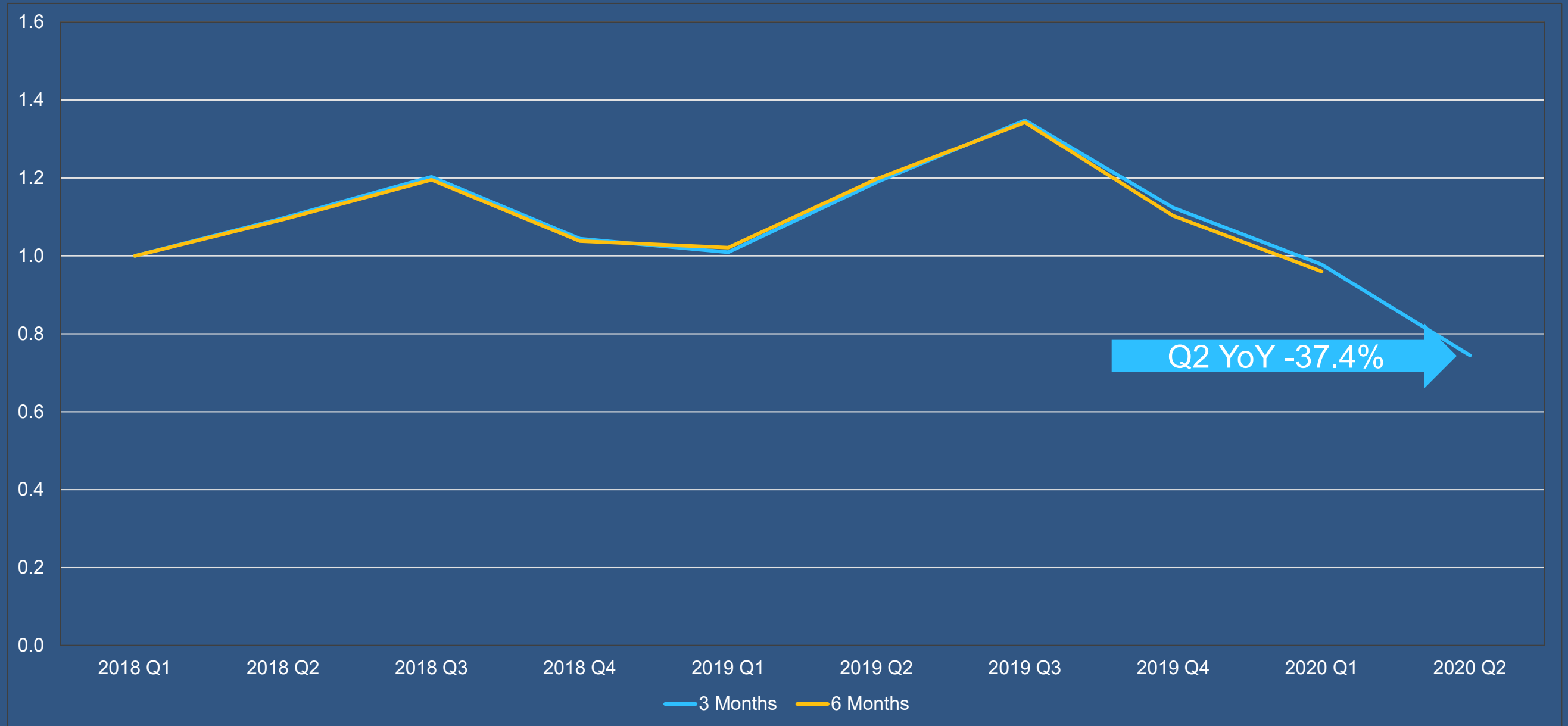


Impact of Economic Slowdown Frequency Model Forecasts of 2019 to 2022



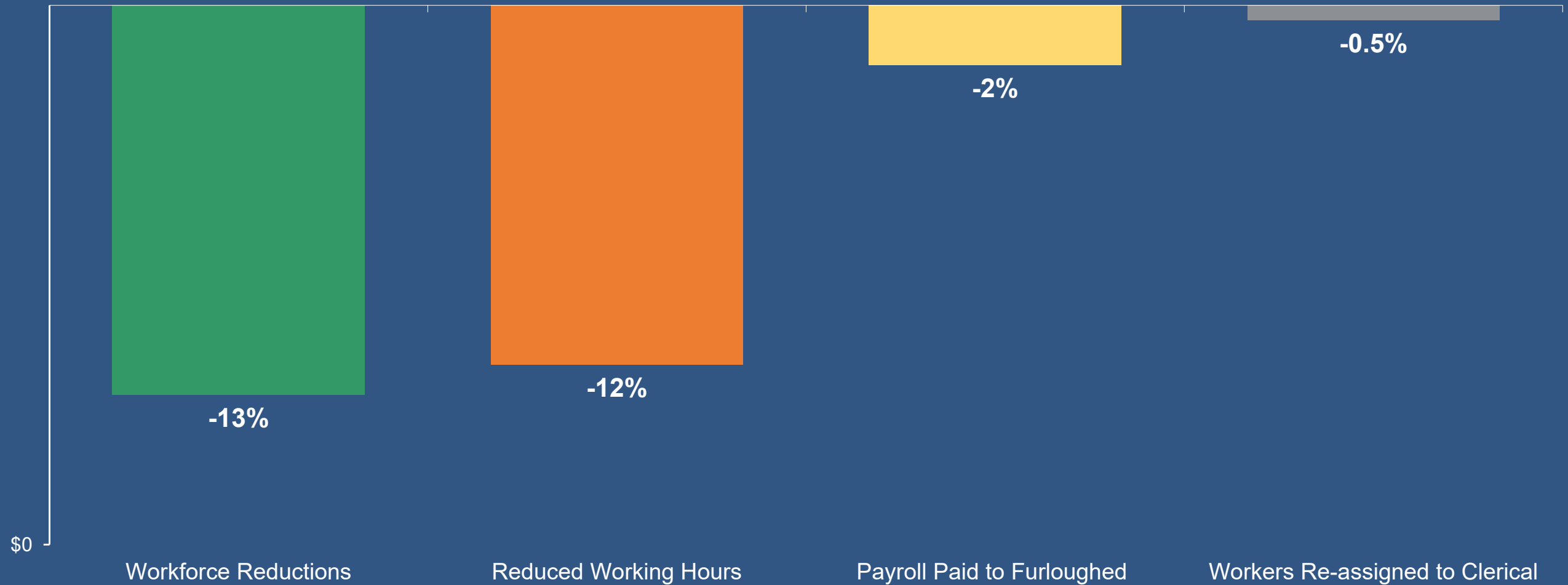
Impact of Economic Slowdown

Claims Reported by Quarter (excl. COVID-19 Claims) Indexed to 2018 Q1



Impact of Economic Slowdown Potential Impact on Exposure – Based on WCIRB Employer Surveys

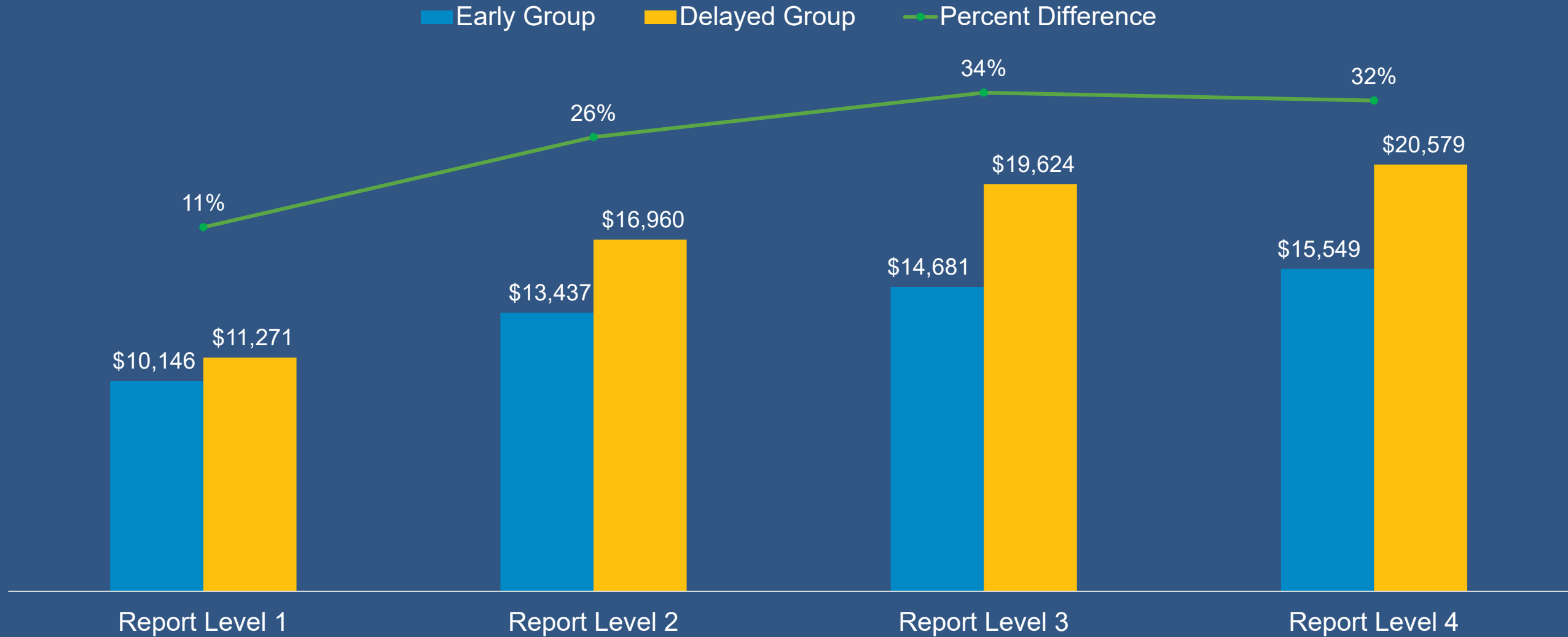
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Severity Growth Projections

Impact of Delayed First Medical Service on Incurred Indemnity Soft Tissue Claims

Incurred Indemnity Benefits Comparing Delayed Group to Similar Early Group

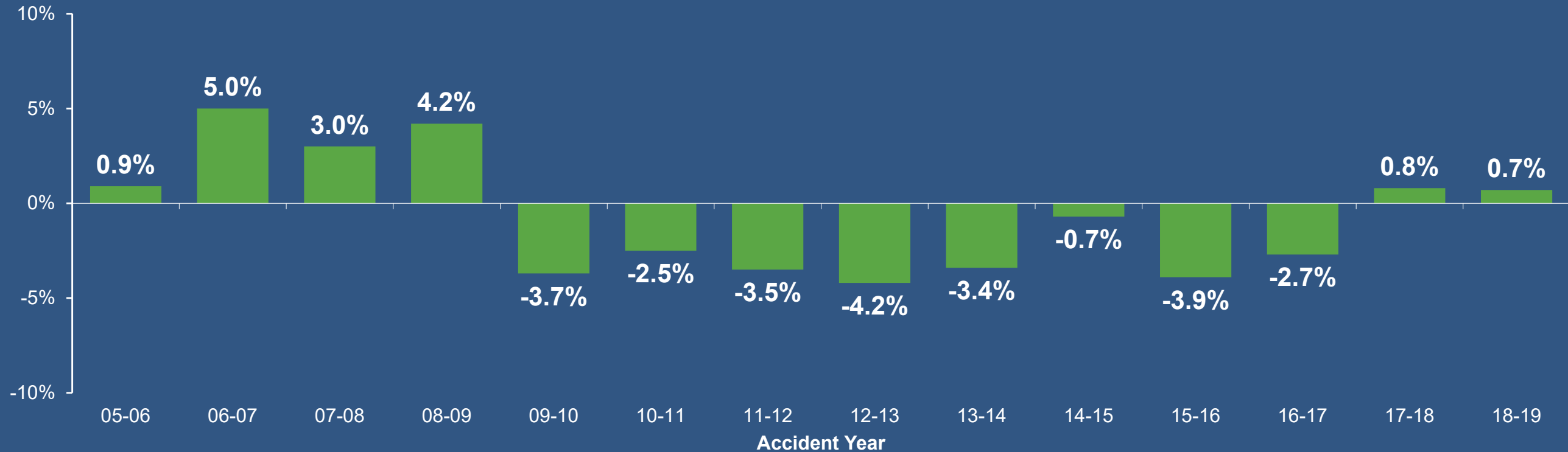


Severity Growth Projections

Projected Changes in On-Level Indemnity Severity

As of March 31, 2020

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Annual Exponential Trend Based on:

1990 to 2019: +1.1%

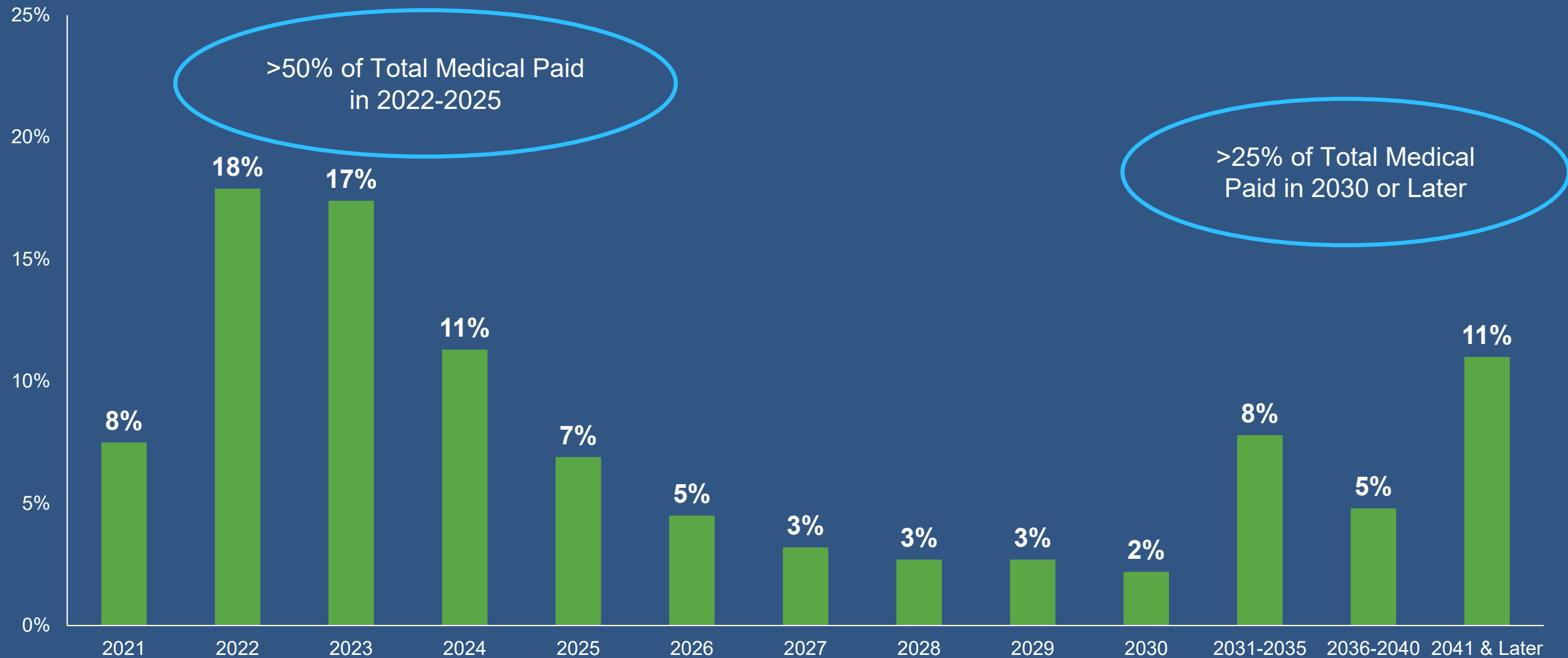
2005 to 2019: -1.4%

2015 to 2019: -1.2%

Actuarial Committee Recommended: **+1.0%**

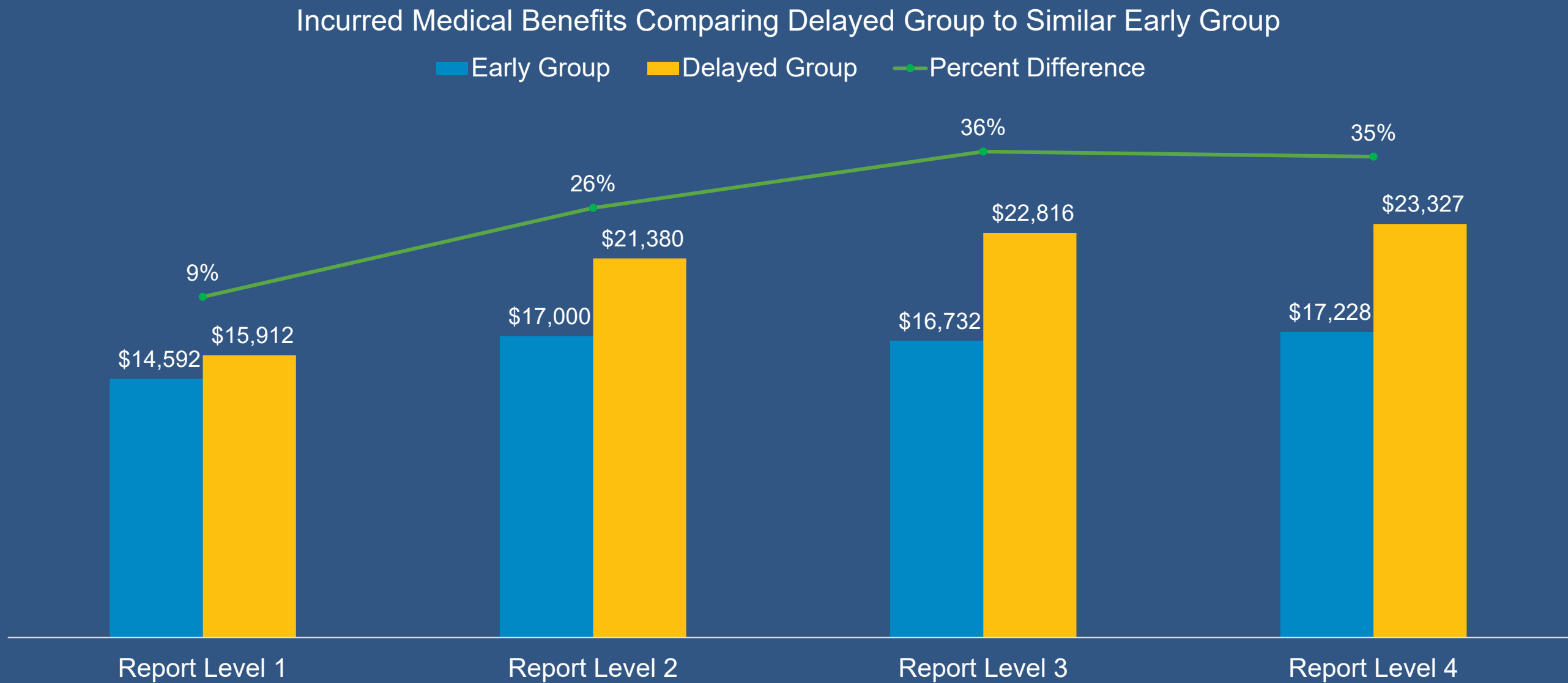
Severity Growth Projections Policy Year 2021 – Estimated Medical Paid by Year

As of December 31, 2019



Severity Growth Projections

Impact of Delayed First Medical Service on Incurred Medical Soft Tissue Claims

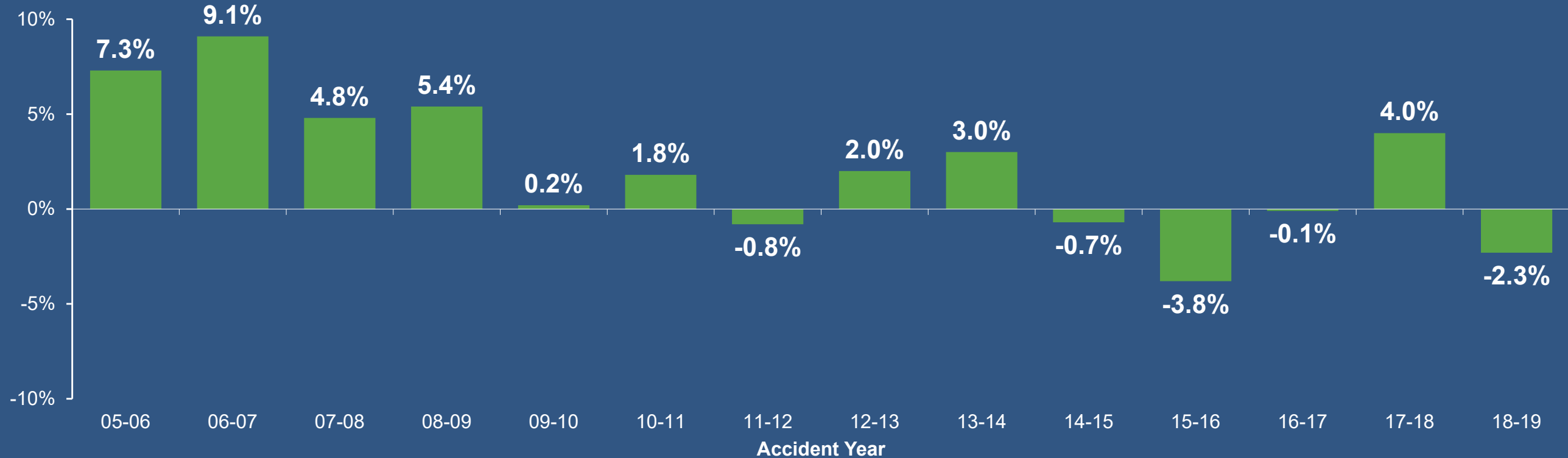


Severity Growth Projections

Projected Changes in On-Level Medical Severity

As of March 31, 2020

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Annual Exponential Trend Based on:

1990 to 2019 (Incl. MCCP): +5.5%

2005 to 2019: +1.6%

2015 to 2019: -0.1%

Actuarial Committee Recommended: **+2.5%**

Loss Adjustment Expense Projection Methodology

Basis of Actuarial Committee Recommendation

- ULAE data for 2016-2019 reflects updated allocation method (open indemnity counts)
- ULAE projection methodology consistent with prior years (Private Insurers Only)
- ALAE Methodology
 - Trended ultimate severity per open indemnity claim based on private insurer ALAE
 - ALAE projection adjusted for SB 1160 lien reduction
 - New recommended adjustment to ALAE development for claim settlement acceleration
- MCCP Methodology
 - Similar to ALAE except uses statewide experience and no reform or claim settlement adjustments
- Projected LAE ratio: 34.0% of losses (compared to 36.4% in 1/1/2020 Filing)
- Actuarial Committee Votes
 - **8** in Favor – **1** Abstention
 - Committee member abstaining used slightly different frequency, loss ratio and trend assumptions

COVID-19 Claim Cost Projection

Basis of Actuarial Committee Recommended Methodology

- Very challenging projections as limited information on COVID-19 rates in 2021 and 2022
- COVID-19 Projection Methodology – Projection of AY 2020 California Working Age COVID-19 Claim Costs
 - Estimate 2020 COVID-19 deaths based on two available projection models extended to end of year
 - Estimate 2020 COVID-19 hospitalizations based on assumed “first wave” hospitalization rate from other states
 - Validated for reasonableness against death and hospitalizations reported-to-date
 - Assumed existence of presumption roughly comparable to presumption in Governor’s Executive Order
 - Severity by claim type projected equal to severities in WCIRB’s evaluation of Governor’s Executive Order
 - “Converted” to workers’ compensation claims based on historical relationship of workers’ compensation claims to statewide working age COVID-19 claims through late July
- COVID-19 Projection Methodology – Projection of AYs 2021-22 California Working Age COVID-19 Claim Costs
 - Estimate AYs 2021-22 COVID-19 claim costs based on judgmentally assumed relativity to AY 2020 claim costs
- COVID-19 Projection Methodology – Adjustment to proposed 2021 classification advisory pure premium rates
 - Spread to classification as additive factor rather than multiplicative factor
 - Additive factors applied to industry sector on low, medium and high basis depending on rate of COVID-19 claims
 - Temper indications by industry sector based on limited information available (review again in September)
- Actuarial Committee Vote
 - **8** in Favor – **1** Abstention
 - Committee member abstaining supported general approach but used slightly different assumptions

COVID-19 Claim Cost Projection

Estimated AY 2020 Statewide COVID-19 Deaths

- Projected statewide deaths up to Nov 1 based on the latest published projections from IHME and MIT-YYG and extended to end of 2020
 - Applied the forecasted incremental change from Oct to Nov to last two months of 2020 assuming a potential winter wave
- Adjusted to the working-age population (18-69 years) based on the CDPH's age distribution of deaths

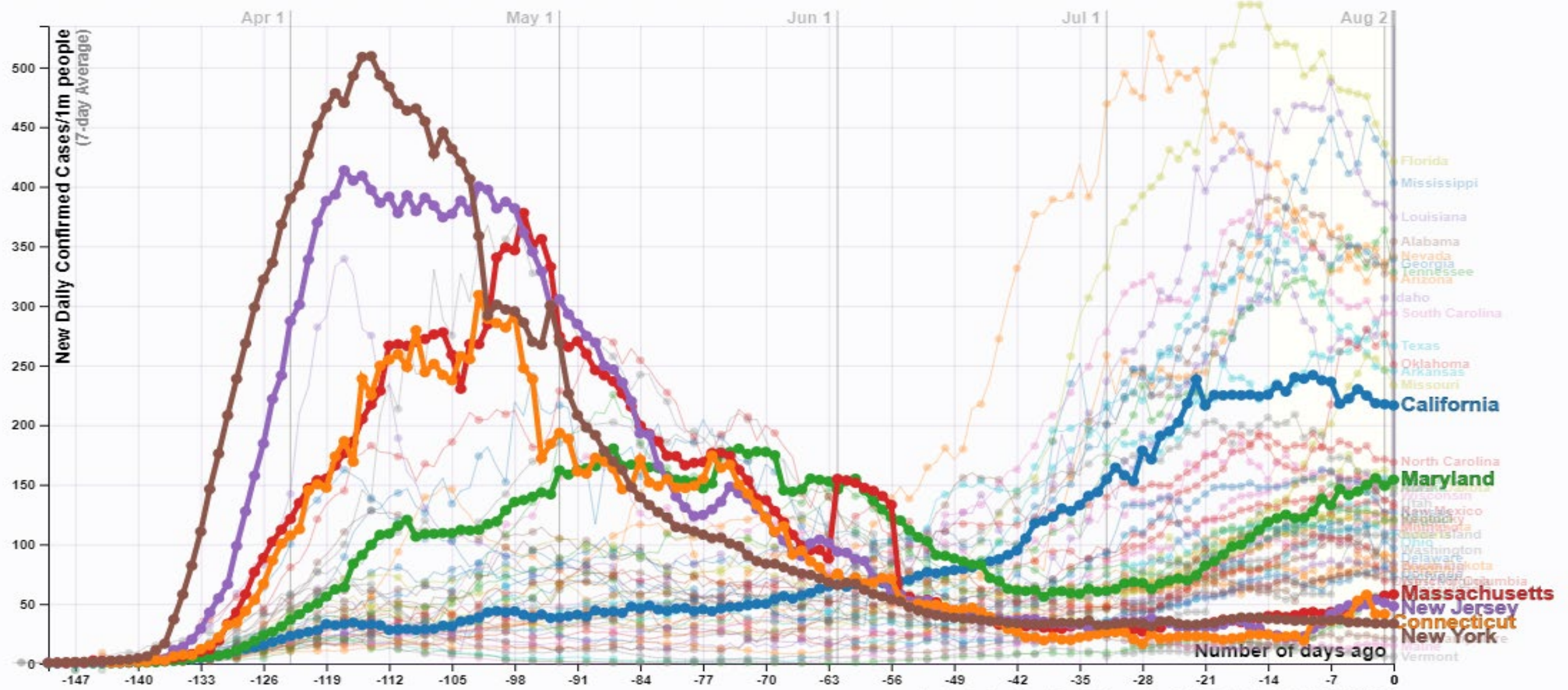
	7/1/2020	8/1/2020	9/1/2020	10/1/2020	11/1/2020	12/1/2020	12/31/2020
Ca DPH (Actual)	6,090	9,356					
Avg. of MIT-YYG and IHME Projections (as of 8/3/2020)			12,531	15,158	17,602		
Incremental Monthly Change				2,628	2,444	2,444	2,444
Estimated statewide COVID deaths						20,046	22,490
Estimated COVID deaths for the working age population (18-69 years)							7,790

COVID-19 Claim Cost Projection

Basis of Estimated AY 2020 Statewide COVID-19 Hospitalizations

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New Confirmed COVID-19 Cases per Day by US States/Territories, normalized by population



Data: John Hopkins University CSSE; Updated: 08/03/2020
Interactive Visualization: <https://91-divoc.com/> by @prohwade

COVID-19 Claims Cost Projections

Current vs. Projected COVID-19 Deaths and Hospitalizations

- Staff's Recommendation: using MA's cumulative hospitalization rate to project California's statewide hospitalizations

California Working Age Population (18-69 years)	Current (end of July/Early Aug)	Projected to 2020 Year End	% Change between Aug and Dec 2020
Total Deaths	3,230	7,790	+141%
Total Hospitalizations (incl. deaths)	19,017	48,953	+157%
Mortality per 100k	12	29	+141%
Total Hospitalizations per 100k (incl. deaths)	71	183	+157%
Mortality in the Hospital (deaths / total hospitalized)	17%	15.9%	-7%

- If using the average of MA and MD to project statewide hospitalizations:

California Working Age Population (18-69 years)	Current (end of July/Early Aug)	Projected to 2020 Year End	% Change between Aug and Dec 2020
Total Hospitalizations (incl. deaths)	19,017	53,638	+182%

COVID-19 Claim Cost Projection

COVID WC Claims vs. COVID Cases for the Working Age Population

Key Assumptions:

- Approximately 10% of claims filed are denied
- About 50% of mild claims will be filed
- Approximately 83% of California Infections (CDC 8/2/2020) are of the working age population (18-69 yrs)

Mild Cases (18-69 yrs) =
Total Cases (18-69 yrs) - Total
Hospitalizations (incl. Deaths) (18-69 yrs)



50% of Mild Cases + Total
Hospitalizations (incl. Deaths)



COVID Claims Filed in WCIS
(as of July 23, DWC): 22,261

/

COVID Cases (18-69 yrs) likely to File a
WC Claim (as of July 25): 165,688

= 13.4%

Adjusting for approx. 10% claim denial
rate:

= **12%**

COVID-19 Claim Cost Projections

Estimate Relativity for AY 2021 COVID Claims Compared to AY 2020

- Published Forecasts for COVID-19 in 2021 indicate 2021 is not significantly better or worse than 2020
 - More infection waves beyond 2020 and likely continue until July 2022 based on mathematical modeling
 - Outbreaks likely last 18-24 months and won't halt until >60% of the population is immune based on review of past global pandemics
 - Similar number of hospitalizations in 2021 compared to 2020 not unreasonable (based on a Health Affair article)
 - A worst-case scenario analysis in U.K. by the U.K. Academy of Medical Sciences
 - Hospital deaths during Jan/Feb 2021 more than doubled that of spring 2020
 - Yet no study accounted for the potential impact of a vaccine or existing/new treatments
- National and local public health experts anticipate repeated waves in the future

COVID-19 Claim Cost Projection

Published Information on Improved Treatments and Potential Vaccines

- Available Treatments for COVID-19
 - Dexamethasone (an anti-inflammatory steroid recommended for severe COVID infections)
 - Prelim report showed mortality reduced by 12% among ICU patients
 - Remdesivir (FDA approved for hospitalized patients)
 - Shown to reduce time to recovery by 4 days (15 days vs. 11 days)
 - Convalescent plasma (FDA approved for severe or life threatening COVID-19)
 - Prone positioning reduces need for ventilators by 46%
- Treatments under clinical trial investigation (about 1,900 ongoing trials)
 - Inhaled beta interferon: a U.K. trial showed an 80% mortality reduction among 100 hospitalized patients
 - Plasma-based therapy
- Potential vaccines
 - An effective vaccine by early 2021 highly likely
 - > 140 potential COVID vaccines in various stages of development (WHO)
 - A study on 2009 influenza pandemic (H1N1) shows the vaccines prevented about 4% of both deaths and hospitalizations, and 3% of total infections.
- Improved clinical guidelines for treating COVID-19

COVID-19 Claim Cost Projection

AY 2020 Projected COVID-19 Claim Costs – Actuarial Committee Recommendation

(1) AY 2020 Statewide Deaths Working Age Population:	7,800
(2) AY 2020 Statewide Hospitalizations (ex deaths) Working Age Population:	41,200
(3) WC Death and Hospitalization Claim Conversion Factor:	12%
(4) AY 2020 Estimated WC Death Claims: (1) x (3)	940
(5) AY 2020 Estimated WC Death Claim Costs: (4) x Avg. Death Severity	\$0.4B
(6) AY 2020 Estimated WC Hospitalization (ex. deaths) Claims: (2) x (3)	4,950
(7) AY 2020 Estimated WC Hospitalization Claim Costs: (6) x Avg. Hospitalization Severity	\$0.7B
(8) Statewide AY 2020 COVID-19 Loss & LAE: (5) + (7) + (mild claim costs)	\$1.1B
(9) Insured Market Share of COVID-19 Claims:	63%
(10) Projected AY 2020 Insured Market COVID-19 Loss & LAE: (8) x (9)	\$0.7B

COVID-19 Claim Cost Projection

AY 2021 Projected COVID-19 Claim Costs – Actuarial Committee Recommendation

11) Estimated Relativity AY 2021 to AY 2020 COVID-19 Claims:	1.0
12) Judgmental Adjustment for Improved Treatment & Potential Vaccine:	25%
13) AY 2021 Insured Market COVID-19 Loss & LAE: (10) x (11) x {1 – (12)}	\$0.52B
14) AY 2021 Insured Market Projected Non-COVID-19 Loss & LAE:	\$10.9B
15) AY 2021 COVID-19 Adjustment Factor: (13) / (14)	4.7%

COVID-19 Claim Cost Projection

PY 2021 Projected COVID-19 Claim Costs – Actuarial Committee Recommendation

16) Estimated Relativity AY 2022 to AY 2020 COVID-19 Claims: (incl. Judgmental Adjustment for Improved Treatment & Potential Vaccine)	0.33
17) AY 2022 Insured Market COVID-19 Loss & LAE: (10) x (16)	\$0.23B
18) AY 2022 Insured Market Projected Non-COVID-19 Loss & LAE:	\$12.0B
19) AY 2022 COVID-19 Adjustment Factor: (17) / (18)	1.9%
20) 1/1/2021-8/31/2021 Policy Period COVID-19 Adjustment Factor {(15) x 67%} + {(19) x 33%}	3.8%

COVID-19 Claim Cost Projection

Classification Advisory Pure Premium Rates

■ Actuarial Committee Recommendation – 1/1/2021 – 8/31/2021 Policy Period

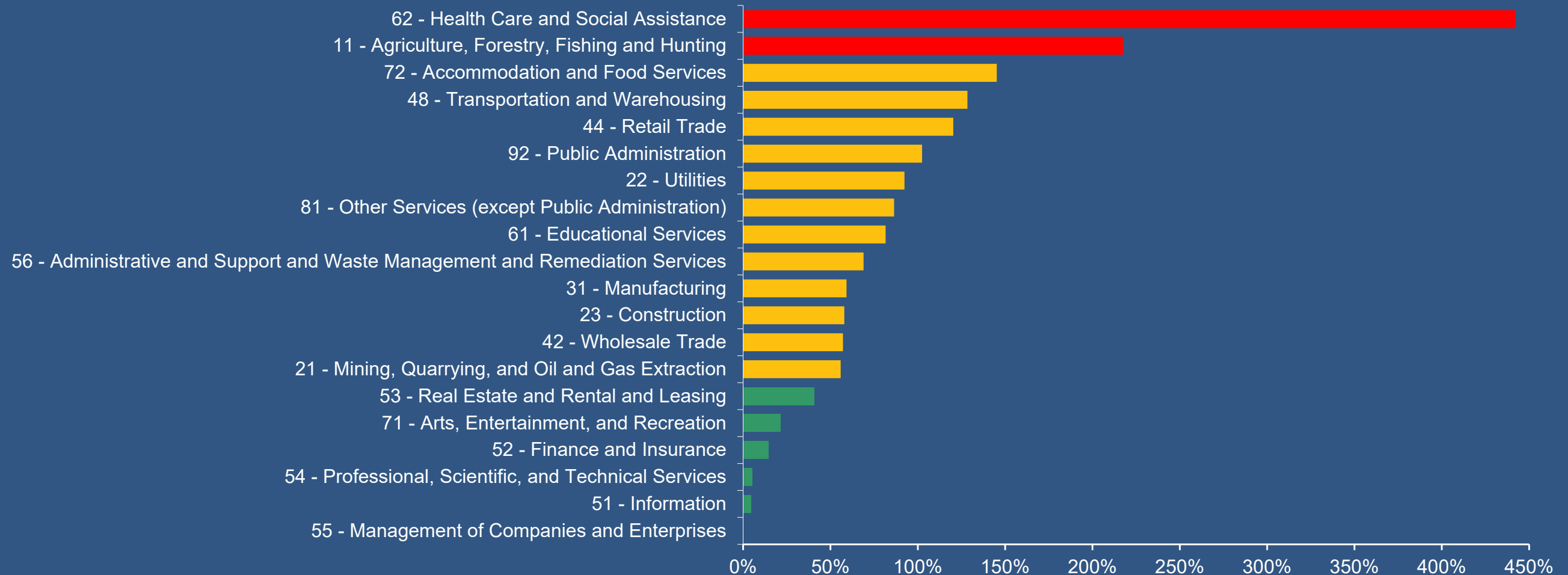
- Projected COVID-19 Loss & LAE 3.8% of total loss & LAE
- Approximately \$0.06 per \$100 of payroll

■ Proposed 2021 Advisory Pure Premium Rates – Actuarial Comm. Recommendation

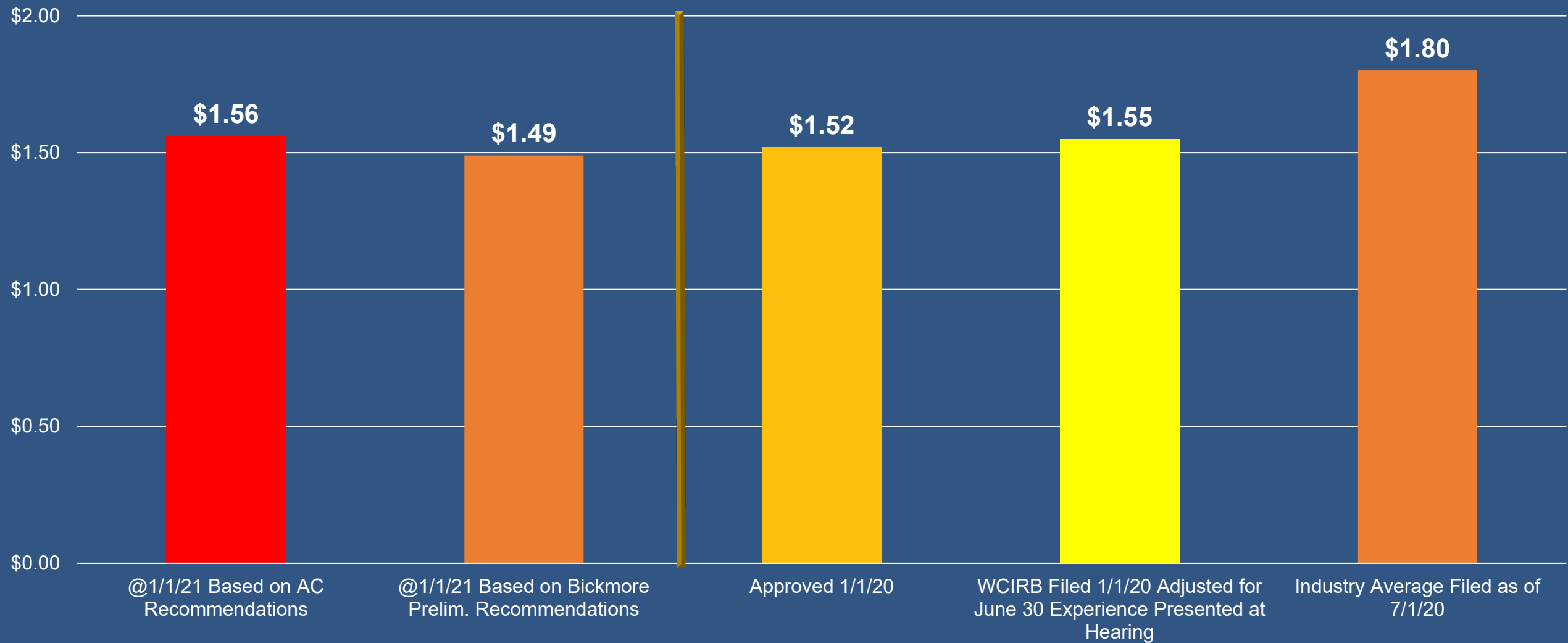
- Apply additively not multiplicatively
- Vary by industry sector between “high”, “medium” and “low” additive factors based on ratio of reported COVID-19 claims to estimated payroll in industry sector
- “High” sectors include health care and agriculture with a ratio more than twice the statewide average
- “Low” sectors include information and finance as well as others with a ratio less than half the statewide average
- Balance overall adjustments to statewide average
- Temper indications based on preliminary data due to data limitations
- Low rated classifications could see significant increase in advisory pure premium rate
- Re-evaluate in September

COVID-19 Claim Cost Projections

Estimated Relativity of COVID Losses to Payroll by Industry



Average Pure Premium Rates per \$100 of Payroll



January 1, 2021 Change in Advisory Pure Premium Rates

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September Re-Evaluation

Questions?

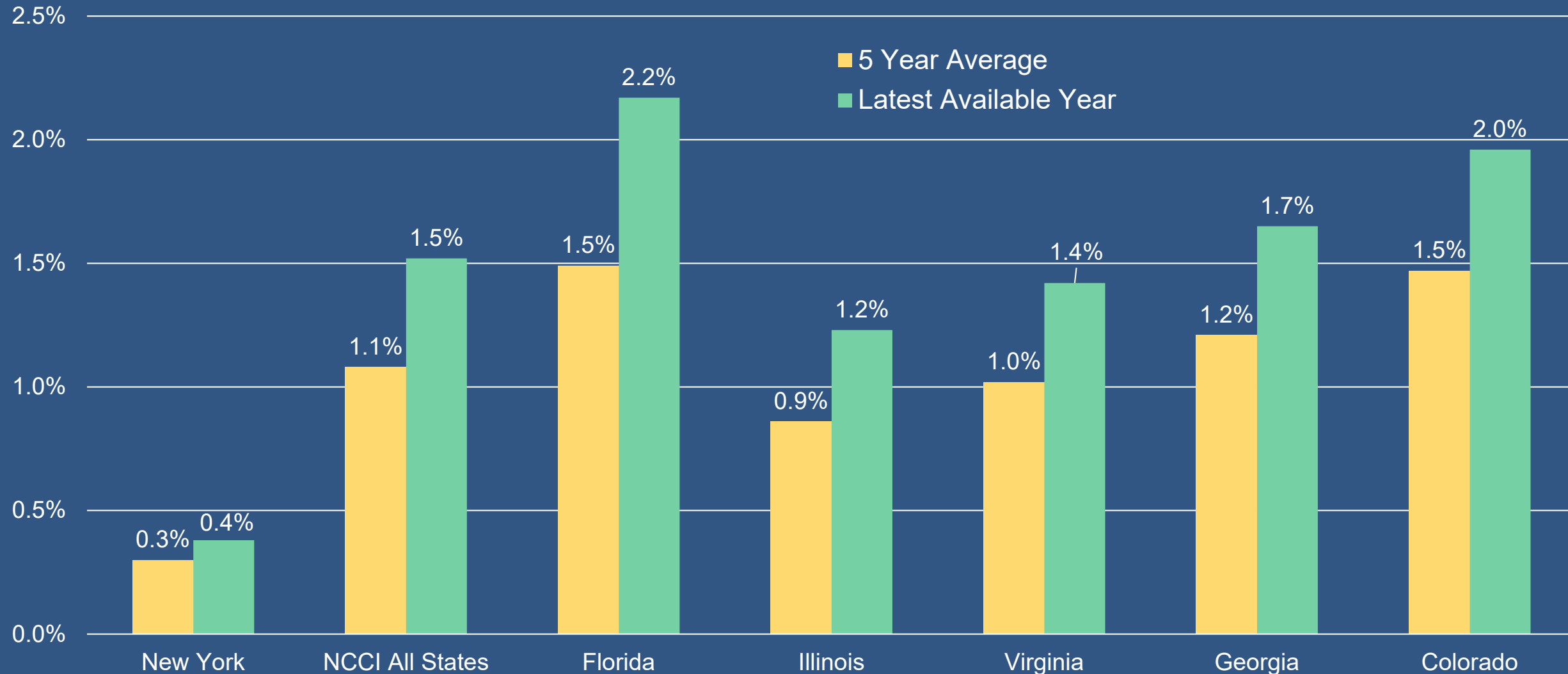
Discussion

Adoption

Classification 8871 – Advisory Pure Premium Rate Summary

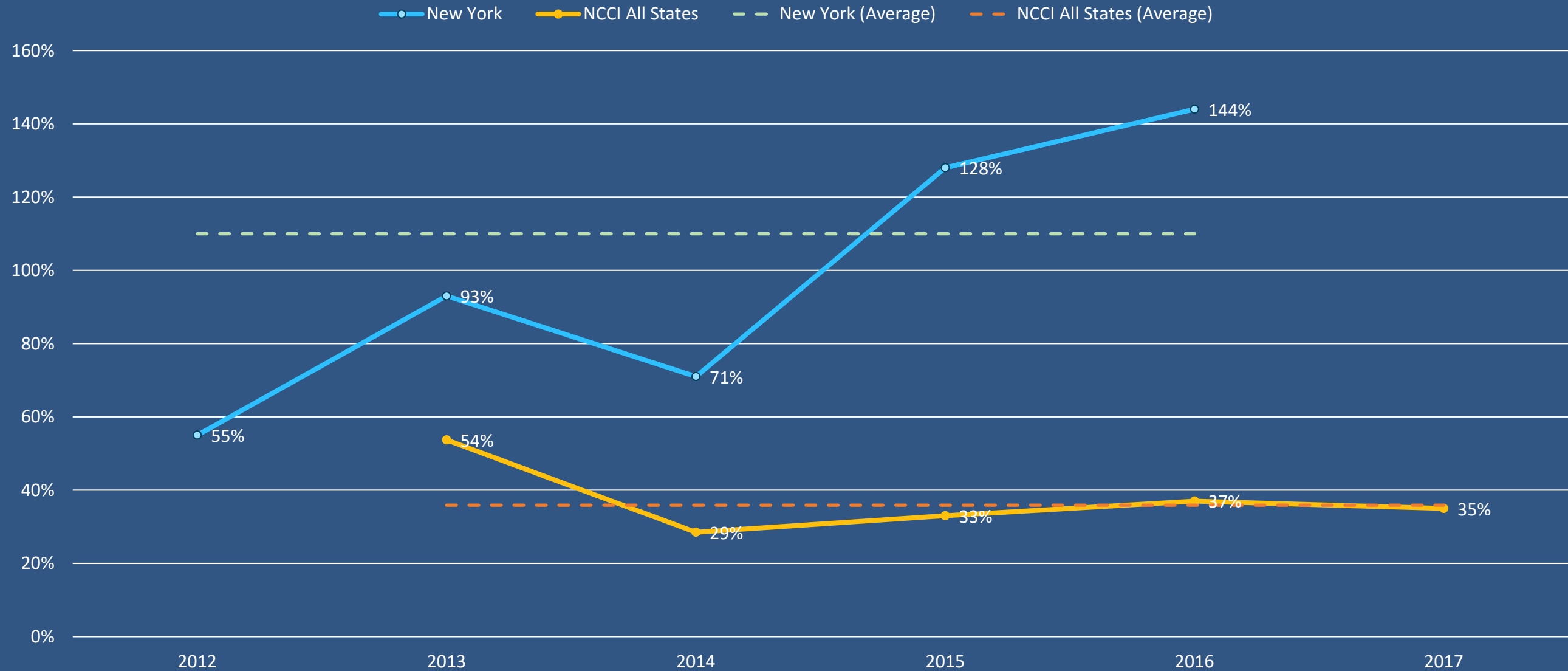
- **Committee Requested that Staff Review at June 11, 2020 Meeting**
- **Other States Experience**
 - Class 8871 payroll very small relative to Class 8810 payroll (0.3% to 1.5%)
 - Class 8871 loss to payroll ratio significantly less in NCCI states (approx. 65% lower)
 - Class 8871 loss to payroll ratio somewhat higher in New York (approx. 10% higher)
 - Classes 8810 and 8871 in other states include software engineers (Class 8859 in California)
- **California**
 - Large portion of statewide payroll (20%) in classes that include clerical and not eligible for 8871
 - CT claims significant in California and a disproportionate share of Class 8810 claims
 - Class 8859 is 9% of statewide payroll and includes clerical so Class 8871 is not applicable
- **Other Considerations**
 - Loss experience of new telecommuters may be different
- **WCIRB Committee Review**
 - Consensus of C & R and Actuarial Committees is to not reflect other states' experience in proposed 2021 advisory pure premium for Class 8871
 - Review preliminary California loss to payroll experience in Class 8871 in 2021

Classification 8871 – Advisory Pure Premium Rate Ratio of Classification 8871 Payroll to Classification 8810 Payroll

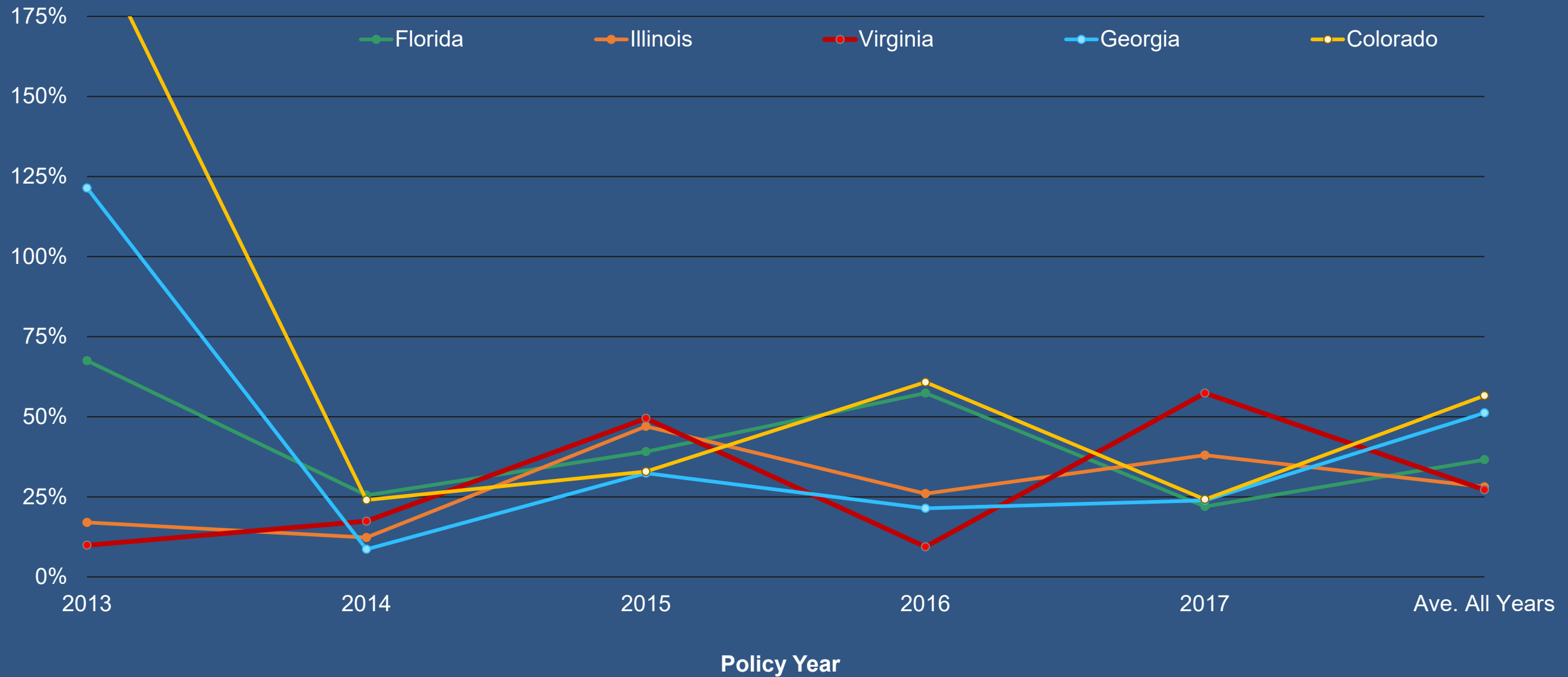


Source: NYCIRB through Policy Year 2016 and NCCI states through Policy Year 2017

Classification 8871 – Advisory Pure Premium Rate Loss to Payroll Ratio of 8871 Relative to Class 8810 by Year & State



Classification 8871 – Advisory Pure Premium Rate Loss to Payroll Ratio of 8871 Relative to Class 8810 by Year & State



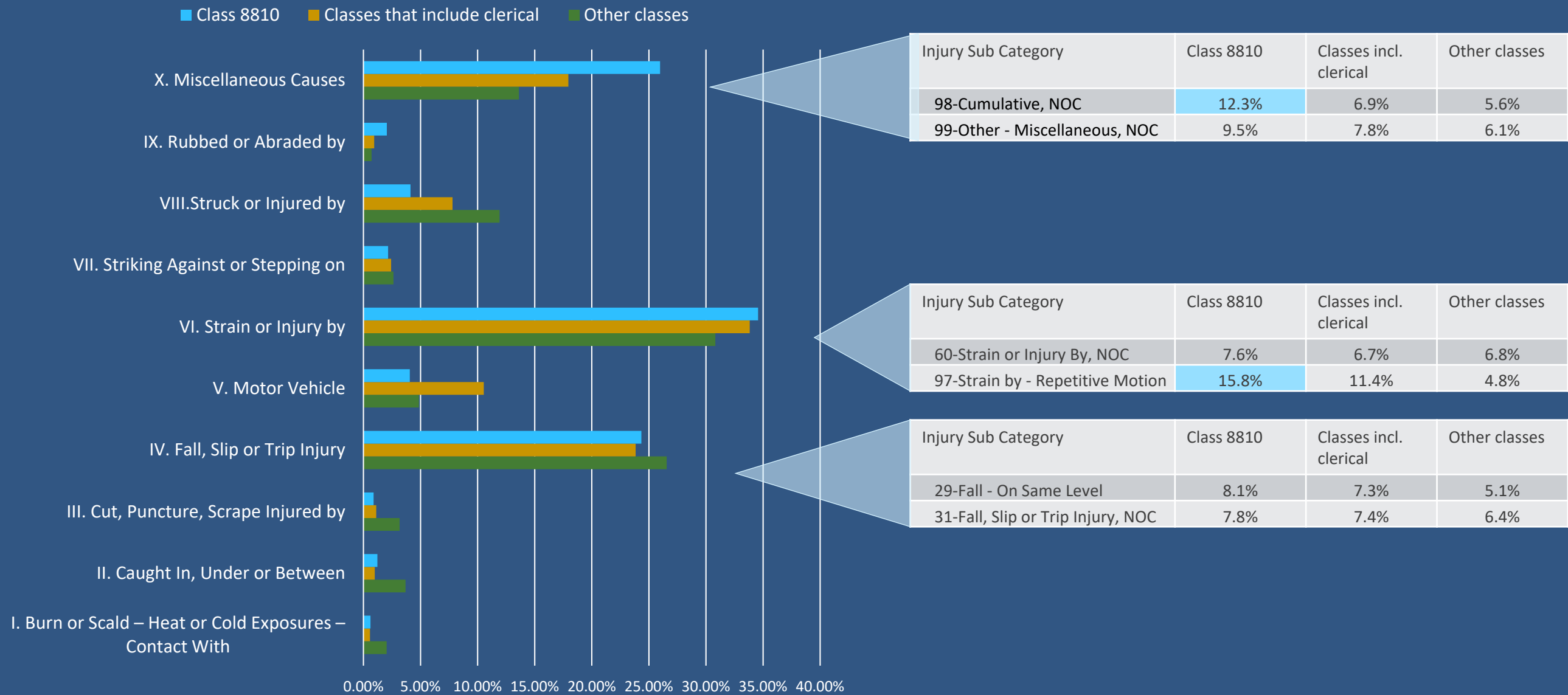
Source: NCCI.

Classification 8871 – Advisory Pure Premium Rate Payroll Distribution by Region in Select California Classifications

Region	Class 8810	Classes that incl. clerical	Other Classes	Total	Class 8810	Classes that incl. clerical	Other Classes	Total
Bay Area	51.5	102.2	227.8	381.5	27.0%	45.0%	30.6%	32.8%
Los Angeles County	55.8	43.8	185.9	285.5	29.3%	19.3%	25.0%	24.6%
Remainder of LA Basin	25.3	25.9	101.2	152.5	13.3%	11.4%	13.6%	13.1%
Out-of-State	19.4	18.5	69.5	107.5	10.2%	8.2%	9.3%	9.2%
San Diego County	16.1	12.6	52.5	81.1	8.5%	5.5%	7.0%	7.0%
Central Coast	10.8	11.9	40.7	63.4	5.7%	5.3%	5.5%	5.5%
Central Valley	5.2	4.2	32.8	42.1	2.7%	1.8%	4.4%	3.6%
Sacramento	4.4	5.2	21.7	31.4	2.3%	2.3%	2.9%	2.7%
Remaining Cal. Regions	1.9	2.5	12.9	17.3	1.0%	1.1%	1.7%	1.5%
Total	190.3	226.8	745.0	1,162.2	100.0%	100.0%	100.0%	100.0%

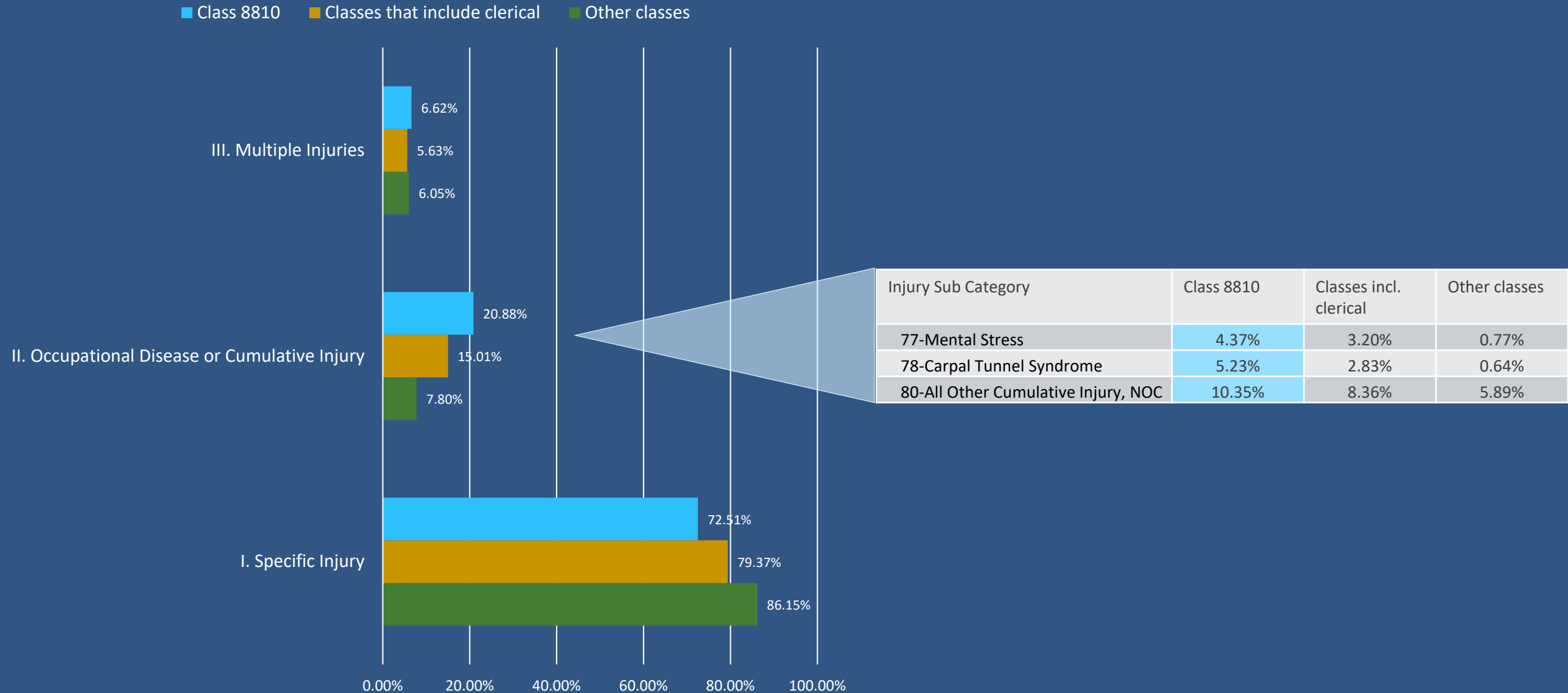
Classification 8871 – Advisory Pure Premium Rate

Leading Causes of Injury in Select California Classifications



Source: Incurred losses are from Policy Year 2017 Unit Statistical Reporting data at report level 1.

Classification 8871 – Advisory Pure Premium Rate Leading Nature of Injuries in Select Classifications



Classification 8871 – Advisory Pure Premium Rate Summary

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 - Review preliminary California loss to payroll experience in Class 8871 in 2021

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