

August 26, 2020

By Email

The Honorable Ricardo Lara
Insurance Commissioner
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Bill Mudge
President
& Chief Executive Officer

**RE: California Workers' Compensation Insurance
Advisory Pure Premium Rates and Experience Rating Plan Values
Effective January 1, 2021
CDI File No. REG-2020-00014**

Dear Commissioner Lara:

The Workers' Compensation Insurance Rating Bureau of California (WCIRB), a licensed rating organization and the designated statistical agent of the Insurance Commissioner, is submitting the proposed advisory pure premium rates contained in the enclosed filing pursuant to Article 2 of Chapter 2, and Articles 2 and 3 of Chapter 3, Part 3, Division 2, of the Insurance Code of the State of California. The proposed advisory pure premium rates contained in this filing were authorized by the WCIRB's Governing Committee for submission to you for review and approval.

Advisory Pure Premium Rates

The advisory pure premium rates contained in Section A are proposed to become effective January 1, 2021 for workers' compensation insurance policies with an effective date on or after January 1, 2021. Since the next WCIRB pure premium rate filing is scheduled to be proposed to be effective September 1, 2021, these advisory pure premium rates are contemplated to be effective on policies incepting from January 1, 2021 to August 31, 2021.¹ The pure premium rates, which reflect loss costs including loss adjustment expenses per unit of exposure, are only advisory in that an insurer is not required to use either the proposed or the approved pure premium rates in establishing the rates it will charge.

The proposed advisory pure premium rates reflect the changes to the *California Workers' Compensation Uniform Statistical Reporting Plan—1995* (USRP) that were proposed in the WCIRB's Regulatory Filing submitted on June 25, 2020 (CDI File No. REG-2020-00013) to take effect on January 1, 2021. If some of these regulatory changes are not approved, the WCIRB may need to amend the pure premium rates proposed in this filing for consistency with the Commissioner's Decision on the January 1, 2021 Regulatory Filing.

¹ At the April 3, 2019 meeting, the WCIRB Governing Committee adopted a pure premium rate filing schedule recommended by WCIRB staff after consultation with CDI staff with filings to be made in April with a September 1 effective date with the initial September filing to be submitted in April 2021 with a proposed effective September 1, 2021 date.

The Honorable Ricardo Lara
California Department of Insurance
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The advisory pure premium rates for the approximately 500 standard classifications proposed to be effective January 1, 2021 are on average 2.6% more than the average of the current approved January 1, 2020 advisory pure premium rates. The average of the January 1, 2021 advisory pure premium rates proposed by the WCIRB is \$1.56 per \$100 of payroll.

The proposed January 1, 2021 advisory pure premium rates included in Section A are based on (1) insurer losses incurred during accident year 2019 and prior accident years valued as of March 31, 2020, (2) insurer loss adjustment expenses for 2019 and prior years, (3) information on COVID-19 related infections, hospitalizations and deaths through approximately August 1, 2020, (4) classification payroll and loss experience reported for policies incepting in 2017 and prior years and (5) the 2021 experience rating off-balance correction factor. The first three components are discussed in Section B of this filing while the last two components are discussed in Section C of the WCIRB's January 1, 2021 Regulatory Filing.

The proposed pure premium rates are based on loss experience valued as of March 31, 2020 and COVID-19 information through approximately August 1, 2020. The WCIRB will be reviewing accident year experience valued as of June 30, 2020 once it is received and will continue to review more current information on the COVID-19 pandemic. Based on these reviews, and if authorized by the WCIRB Governing Committee, the WCIRB will amend the pure premium rates proposed in this filing prior to the time of the CDI public hearing on this filing. Further, the Legislature remains in session and several bills related to the presumption of compensability of COVID-19 claims of specified workers remain under consideration. If legislative or regulatory changes are adopted or a significant judicial decision is issued prior to the public hearing on this filing, the WCIRB will evaluate the estimated cost impact of these actions and, to the extent appropriate and as approved by the WCIRB Governing Committee, modify the pure premium rates proposed in its filing.

The proposed January 1, 2021 advisory pure premium rates are, on average, 2.6% above the average of the approved January 1, 2020 pure premium rates. Pre-COVID-19 pandemic indemnity and medical loss experience continued to emerge at levels generally consistent with those in recent years. Excluding the impact of the projected level of COVID-19 claims on the costs incurred on January 1, 2021 to August 31, 2021 policies, the indicated change in advisory pure premium rates is -1.3%. However, emerging COVID-19 costs and the effects of the dramatic pandemic related economic slowdown have significantly impacted the WCIRB's projection. These factors are discussed in detail in Section B and are summarized in the Executive Summary.

As in prior WCIRB pure premium rate filings, a number of alternative pure premium rate projections based on methodologies and assumptions that differ from those used to develop the proposed January 1, 2021 advisory pure premium rates are included in Section B, Appendices A, B, C and D for informational purposes. The results of these alternative projections are also summarized in the Executive Summary. In addition, the Executive Summary includes information regarding insurer rates, system costs and the insurance market.

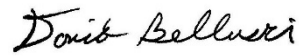
The Honorable Ricardo Lara
California Department of Insurance
August 26, 2020

We shall endeavor to provide you with any additional information you may require.

Sincerely,



Bill Mudge
President & Chief Executive Officer



Dave Bellusci
Executive Vice President & Chief Actuary



Tony Milano
Vice President & Actuary

BM:smd
Enclosures

**Workers' Compensation Insurance
Rating Bureau of California**

**January 1, 2021 Pure Premium Rate Filing
REG-2020-00014**

Submitted: August 26, 2020

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WCIRB January 1, 2021 Pure Premium Rate Filing

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Executive Summary

A. Introduction

Continued decreases in loss development, acceleration in the rate of claim settlements, very modest levels of claim severity inflation and continued decline in pharmaceutical costs and lien filings have driven a series of advisory pure premium rate decreases in California over the past several years. In total, since early 2015, there have been nine consecutive advisory pure premium rate decreases totaling 47%. Pre-COVID-19 pandemic premium and loss experience indicates that these trends, while moderating, have continued. Absent the projected cost of COVID-19 claims incurred on 2021 policies, the WCIRB would be recommending a tenth consecutive advisory pure premium rate decrease. However, in consideration of the projected impact of COVID-19 claim costs on 2021 policies, the WCIRB's proposed January 1, 2021 advisory pure premium rates are on average 2.6% above the current advisory pure premium rates that were adopted by the Insurance Commissioner effective January 1, 2020.¹

Actuarial projections of future claim costs on which the WCIRB's pure premium rate filings are predicated always involve uncertainty as to the assumptions underlying the projection methodologies. Given the unprecedented nature of the "stay-at-home" orders, the pandemic-related economic slowdown and the emergence of tens of thousands of COVID-19 workers' compensation claims, uncertainty as to the assumptions underlying the projections of future cost levels in this filing is particularly high. The January 1, 2021 advisory pure premium rates proposed by the WCIRB reflect the WCIRB's best actuarial estimates of the factors driving workers' compensation costs for 2021 policies. Given the current high level of uncertainty, for informational purposes, the WCIRB has computed a series of alternative loss and loss adjustment expense projections over a range of alternative methodologies and assumptions. These alternatives are discussed in detail in Section B, Appendices A, B, C and D and are summarized in Exhibits 3 through 5.

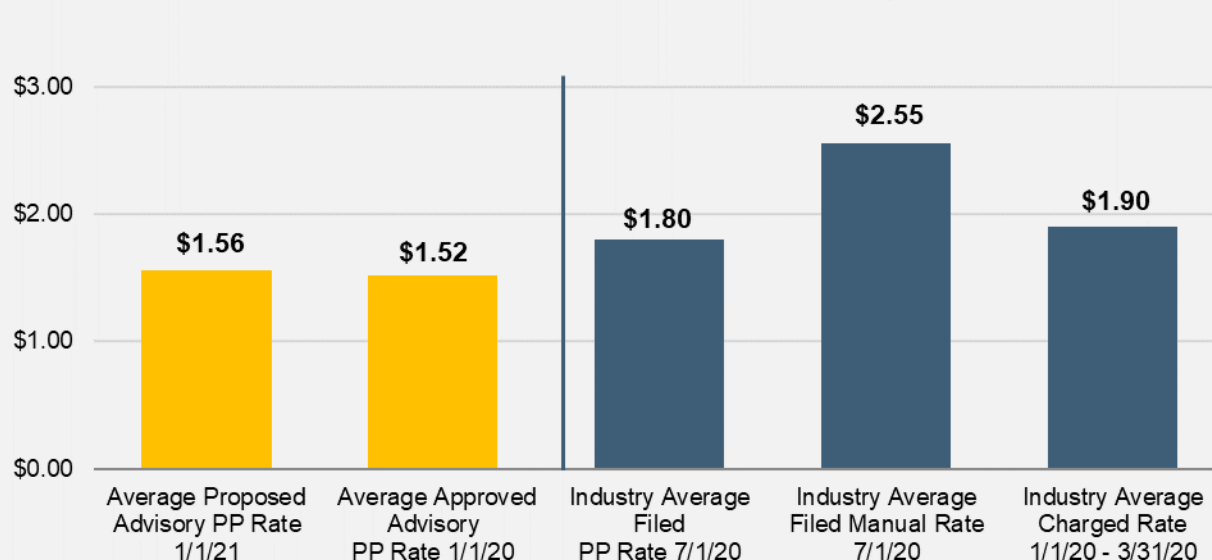
¹ The pure premium rates approved by the Insurance Commissioner are only advisory in that insurers may, and often do, file and use rates other than those approved by the Insurance Commissioner.

B. Rates

The proposed January 1, 2021 advisory pure premium rates average \$1.56 per \$100 of payroll, which is 2.6% more than the average of the approved January 1, 2020 advisory pure premium rates of \$1.52 and 13.6% less than the industry average filed pure premium rate of \$1.80 as of July 1, 2020. In the January 1, 2020 Pure Premium Rate Filing, the indicated average pure premium rate was \$1.55 per \$100 of payroll.²

Chart 1 shows (1) the average of the proposed January 1, 2021 advisory pure premium rates, (2) the average of the approved January 1, 2020 advisory pure premium rates, (3) the industry average filed pure premium rate as of July 1, 2020, (4) the industry average filed manual rate as of July 1, 2020 and (5) the industry average charged rate for the first quarter of 2020 after the application of most insurer rating plan adjustments.³ The methodologies used to compute the industry average filed and charged rates shown in Chart 1 are described in Exhibit 1 of this Executive Summary.

Chart 1 – Advisory Pure Premium Rates and Industry Average Rates per \$100 of Payroll



All rates include adjustment for new payroll limitations effective in 2020 applicable to five classifications.

Sources: WCIRB pure premium rate filings, insurer rate filings submitted to the CDI, and insurer data submitted in WCIRB data calls.

Exhibit 2 shows the advisory pure premium rate proposed by the WCIRB to be effective January 1, 2021 for each standard classification, the corresponding approved January 1, 2020 advisory pure premium rate and the percentage difference between these two pure premium rates. Exhibit 2 also shows the industry average filed pure premium rate as of July 1, 2020 and the percentage difference between the WCIRB's proposed January 1, 2021 advisory pure premium rate and the industry average filed pure premium rate as of July 1, 2020 for each classification.

² This reflects the analysis of June 30, 2019 experience submitted prior to the CDI Public hearing.

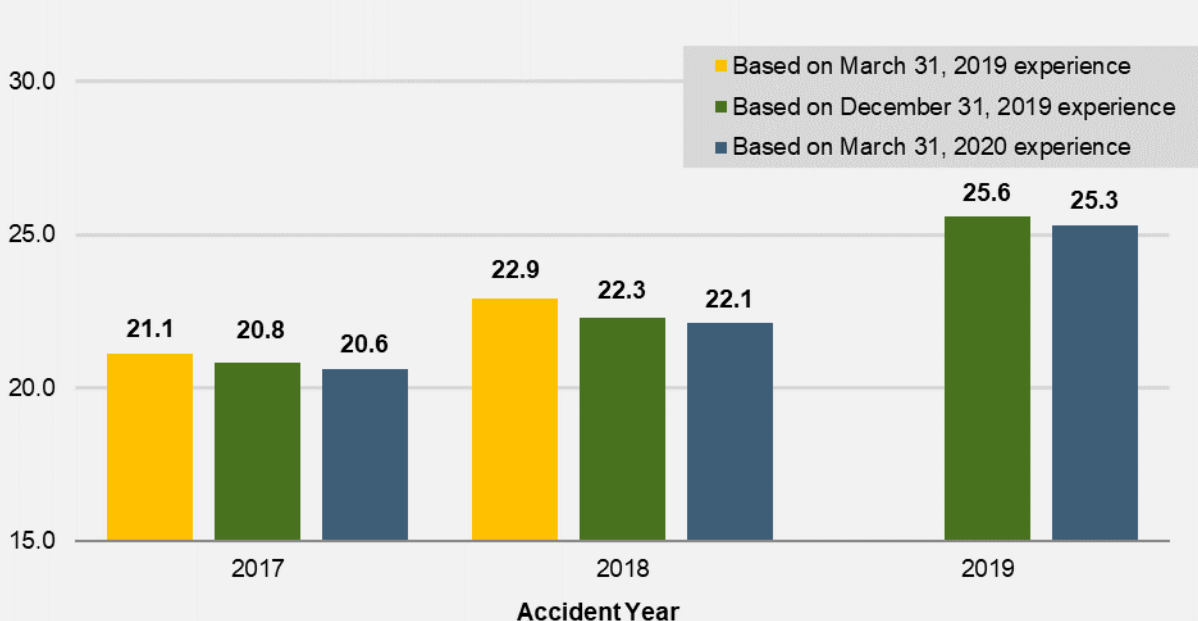
³ This computation is based on reported premium at the insurer rate level, which includes the impact of all insurer rating plan adjustments except for the application of deductible credits, retrospective rating plan adjustments and terrorism charges.

C. System Cost Drivers

The indicated average January 1, 2021 pure premium rate of \$1.56 per \$100 of payroll represents an increase of 2.6% from the average of the January 1, 2020 advisory pure premium rates approved by the Insurance Commissioner. Since early 2015, the approved advisory pure premium rates have declined by approximately 47%. In recent pure premium rate filings, the WCIRB has attributed this improvement to a number of factors including decreases in loss development, acceleration in claim settlement, modest claim severity trends and reduced pharmaceutical costs and lien filings. Prior to the emergence of the COVID-19 pandemic, these trends, while moderating, continued to keep cost levels relatively low. In fact, exclusive of the impact of COVID-19 claims projected to occur in 2021 and 2022, the WCIRB would be recommending a further advisory pure premium rate decrease for January 1, 2021. However, the pandemic-related economic slowdown as well as surges of COVID-19 workers' compensation claims have had a major impact on the California workers' compensation system. Updates to these pre-pandemic trends as well as the estimated impact of the pandemic on the workers' compensation system are summarized below.

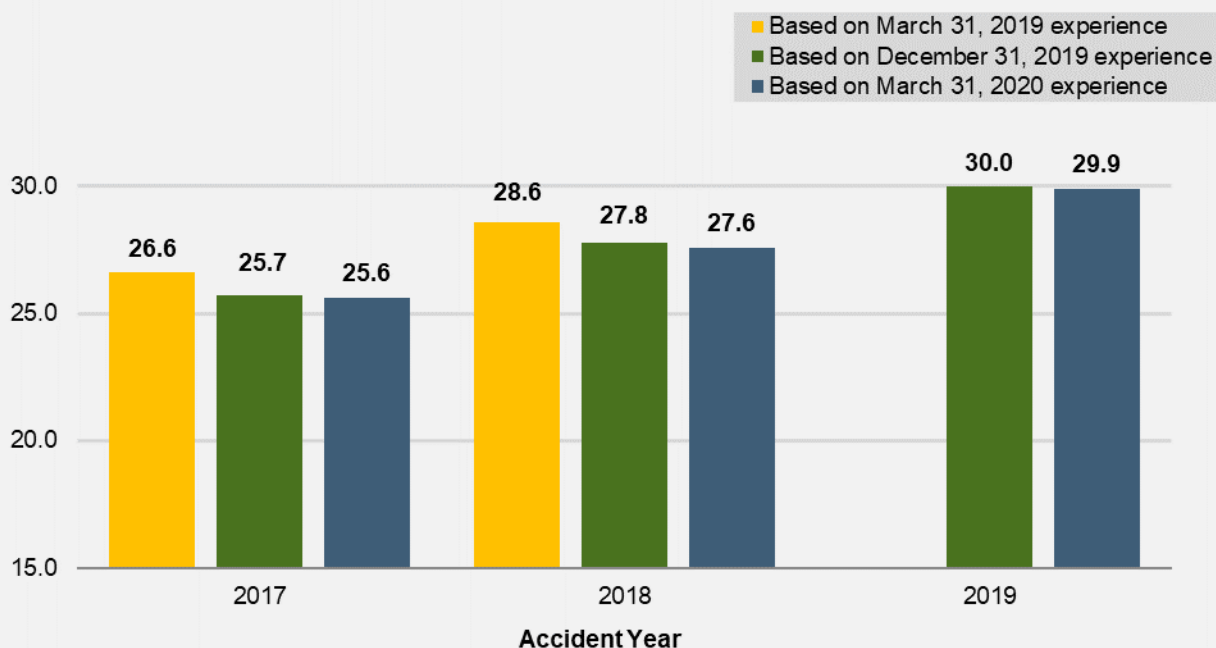
- Loss Development.** Since the WCIRB's January 1, 2020 Pure Premium Rate Filing, loss development has continued to improve, although at a more modest rate than in prior years. While the WCIRB has refined its recommended loss development methodology to address this improvement, further improvement in loss development has lowered estimates of ultimate historical accident year loss ratios and resultant future year projections. Chart 2 shows projected ultimate accident year indemnity loss ratios as of March 31, 2019, December 31, 2019 and March 31, 2020 using a common loss development projection methodology. Chart 3 shows similar information for medical loss ratios. As shown in Charts 2 and 3, the pattern of downward loss development has continued over the last year, although it has moderated, particularly in the latest quarter.

Chart 2 – Change in Projected Ultimate Indemnity Loss Ratio



Source: WCIRB projections based on reported loss development patterns. For consistency of comparison, projections are based on a common loss development methodology and do not reflect refinements made by the WCIRB to the methodology over time.

Chart 3 – Change in Projected Ultimate Medical Loss Ratio

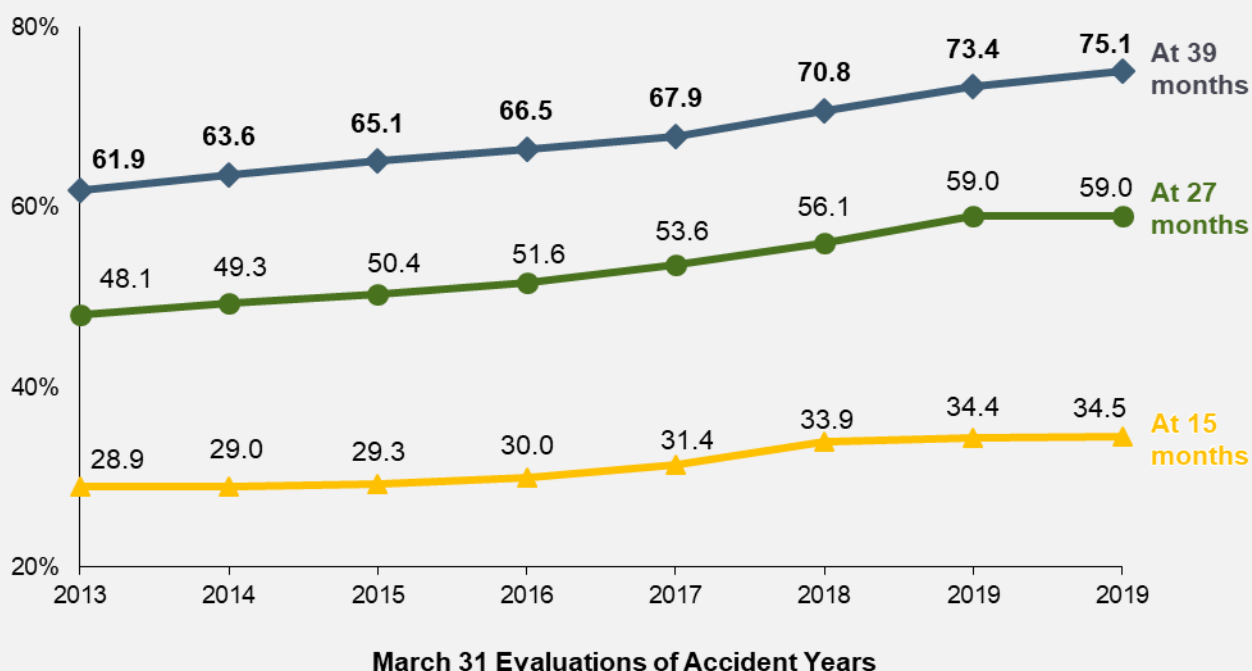


Source: WCIRB projections based on reported loss development patterns. For consistency of comparison, projections are based on a common loss development methodology and do not reflect refinements made by the WCIRB to the methodology over time.

- Rate of Claim Settlement.** Since the implementation of Senate Bill No. 863 (SB 863) beginning in 2013, claim settlement rates have been increasing. SB 863 has contributed to an accelerated rate at which claims have settled through quicker medical treatment dispute resolution resulting from independent medical review (IMR), reduction in the volume of liens, and a significant decrease in the number of spinal surgeries following the elimination of the duplicate reimbursement for these procedures. Reduced opioid use, anti-fraud efforts and further reductions in liens attributable to Senate Bill No. 1160 (SB 1160) and Assembly Bill No. 1244 (AB 1244) have also contributed to this acceleration in claim settlement.

A speed-up in claim settlement can reduce both future loss development and loss adjustment expenses. Chart 4 shows the continued acceleration in claim settlement rates since 2013. Over the last year, claim settlement rates continued to increase but show signs of plateauing, particularly for early evaluations of more recent accident years.

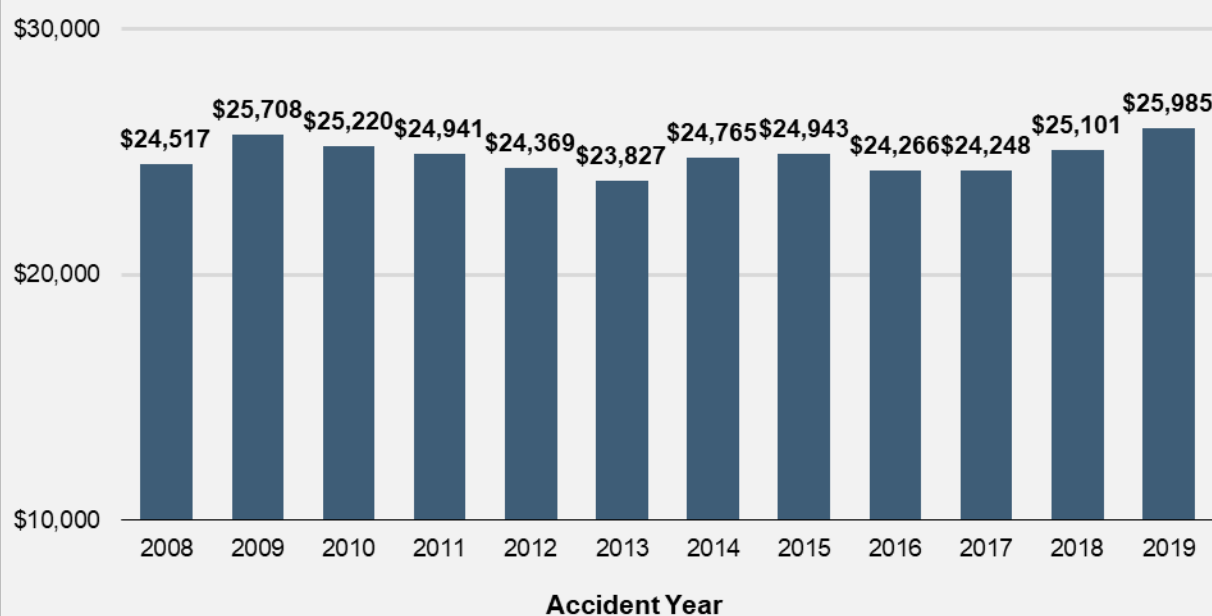
Chart 4 – Indemnity Claim Settlement Ratios



Source: WCIRB projections of ultimate indemnity claim counts and reported claim count information as of March 31, 2020.

- Claim Severities.** Following the enactment of SB 863, average claim severities have until recently been flat to declining. This unprecedented period of decline in average claim severities has been a key driver of the series of advisory pure premium rate reductions beginning in 2015. Chart 5 shows the estimated ultimate indemnity loss per indemnity claim as of March 31, 2020. Chart 6 shows analogous information for the average medical loss per indemnity claim.

As shown in Chart 5, after nine consecutive years of flat to declining average indemnity severities, the average indemnity severity increased by 3.5% in both accident years 2018 and 2019. As shown in Chart 6, after years of flat to declining average medical claim severities, the estimated average medical claim severity increased by almost 4% in accident year 2018 before declining by 1.9% in accident year 2019. This recent pattern of generally increasing severities over the last two years may be indicative of the early stages of a return to a more typical inflationary period.

Chart 5 – WCIRB Estimated Ultimate Indemnity Loss per Indemnity Claim

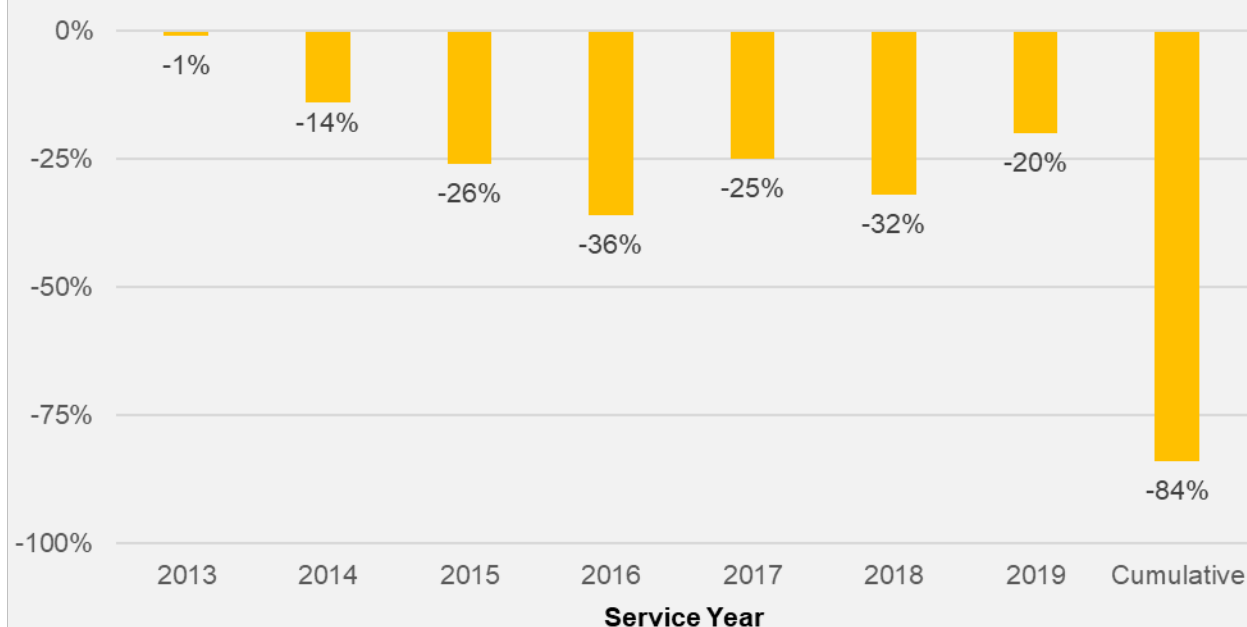
Source: WCIRB projections of ultimate indemnity losses and claims as of 3/31/20 based on reported loss and claim patterns.

Chart 6 – WCIRB Estimated Ultimate Medical Loss per Indemnity Claim

Source: WCIRB projections of ultimate medical losses and indemnity claims as of 3/31/20 based on reported loss and claim patterns. Cost amounts exclude the cost of medical cost containment programs.

- Pharmaceutical Costs.** Since the enactment of SB 863, pharmaceutical costs in California have declined dramatically. Chart 7 shows the change in the cost of pharmaceuticals per claim by year of service. In addition to SB 863 reforms such as those related to IMR and spinal surgeries, other factors such as changes in federal government upper limit pricing levels, anti-fraud efforts, the reaction to the national opioid epidemic and the new California drug formulary implemented in 2018 have also contributed to this decline in pharmaceutical costs. This 84% decline in pharmaceutical costs per claim since 2012 has been a key driver of declining medical severities. While pharmaceutical costs have plummeted in the pre-pandemic environment, there are early indications that pharmaceutical costs per claim are beginning to rise during the pandemic.⁴ At this time, it is not fully clear if the increase is unique to the pandemic period or is indicative of a more long-term pattern.

Chart 7 – Change in Pharmaceutical Costs Per Claim by Service Year



Source: WCIRB medical transaction data.

- Lien Filings.** Lien reforms were one of the cornerstones of SB 863. The WCIRB has estimated that the SB 863 lien reforms reduced system costs by approximately \$0.5 billion annually.⁵ In 2016, SB 1160 and AB 1244 were enacted to be effective January 1, 2017 with the intent of further reducing the number of lien filings.⁶ Chart 8 shows the annual number of lien filings through June 30, 2020 based on data provided by the Division of Workers' Compensation (DWC). As shown on Chart 8, following the enactment of SB 1160 and AB 1244, lien filing volumes dropped sharply and have continued to decline steadily.⁷ This sharp decline has a significant impact on medical loss development and allocated loss adjustment expenses.

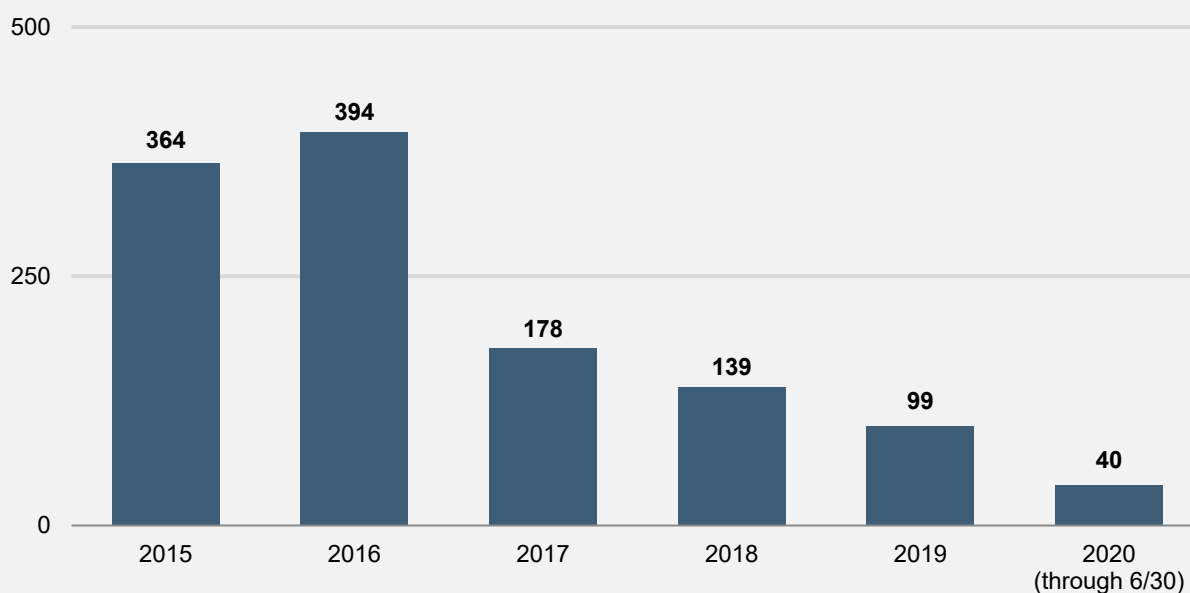
⁴ See Item AC20-08-05 of the August 10, 2020 WCIRB Actuarial Committee Agenda for a preliminary analysis of emerging post-pandemic medical trends.

⁵ *Senate Bill No. 863 WCIRB Cost Monitoring Report – 2016 Retrospective Evaluation*, WCIRB, November 17, 2016.

⁶ The estimated impact of SB 1160 and AB 1244 was reflected in the January 1, 2017 and subsequent pure premium rate filings.

⁷ The decline in lien filings in the second quarter of 2020 may in part be due to the pandemic-related slowdown. However, given the normal timeframes involved in lien filings, it is expected that the pandemic impact will be less in this area than for other system components.

Chart 8 – Lien Filings by Calendar Year (in Thousands)



Source: DWC EAMS lien filings

- Economic Downturn.** The magnitude of the pandemic-related drop in employment in California is unprecedented, both in its magnitude and velocity. In the months since the pandemic broke, the unemployment level in California quickly rose from a near full-employment level to close to 15% unemployment. Additionally, 2020 unemployment reached this level in a matter of months rather than the multi-year periods of prior recessions. Chart 9 shows the annual change in the California unemployment rate since 1962. As shown on Chart 9, the magnitude of the increase in unemployment in 2020 as forecast by the UCLA Anderson School of Business is twice that of any prior recession. Economic downturns can significantly impact future levels of wages, claim frequency and claim severity, each of which is discussed separately below.

Wage Growth. Advisory pure premium rates are expressed in relation to payroll. As a result, growth in average wage levels mitigates inflation effects on loss and loss adjustment expense levels and can reduce pure premium rate level indications. The WCIRB's projections of future wage growth are based on an average of economic forecasts produced by the UCLA Anderson School of Business and the California Department of Finance. Chart 10 shows the changes in average California wage levels including the changes for 2020, 2021 and 2022 as derived from forecasts by UCLA and the Department of Finance. The average of the latest UCLA and Department of Finance forecasts are somewhat below the average wage growth of prior years.

Chart 9 – Annual Change in Unemployment Rate

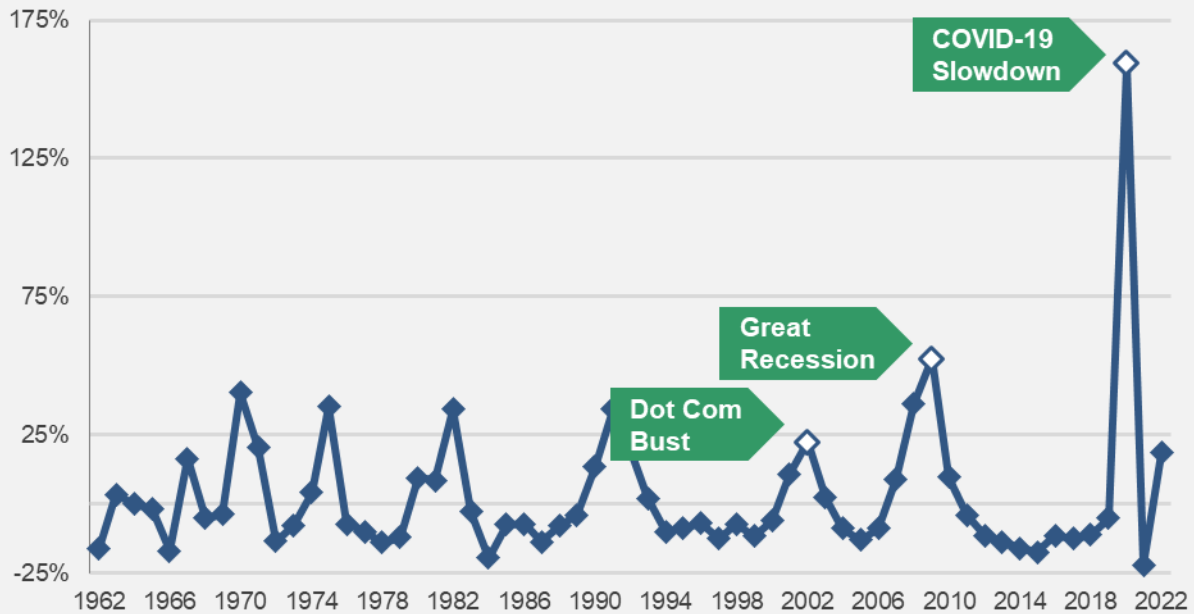
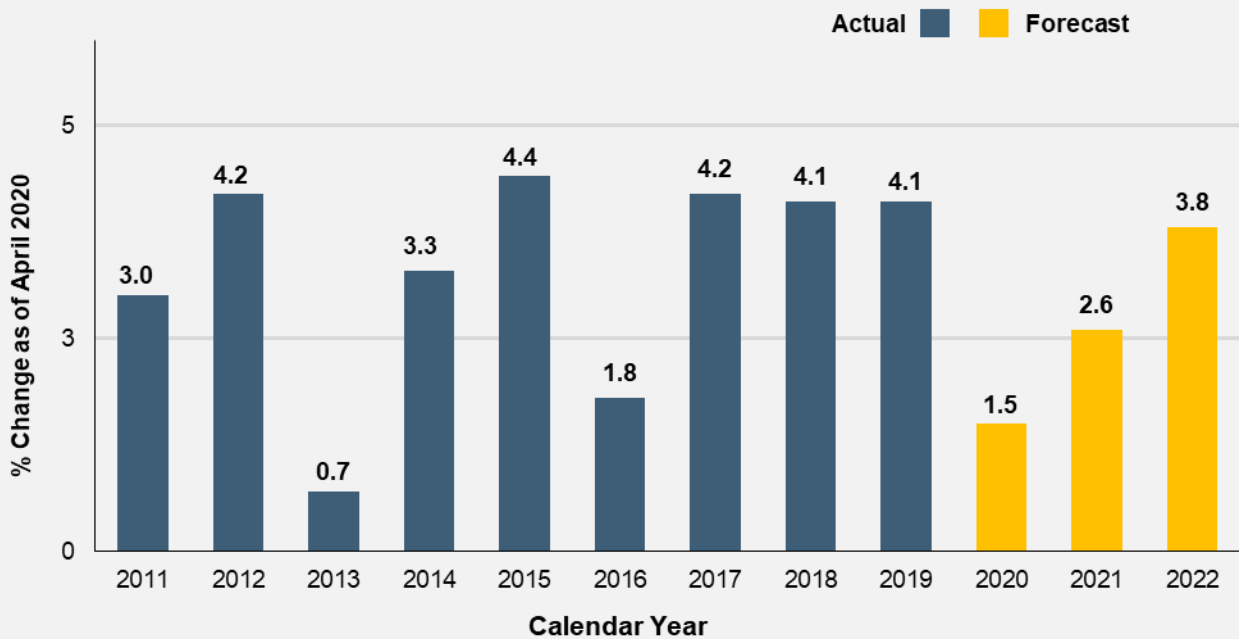


Chart 10 – Historical and Forecast Wage Level Growth



Source: Derived from information provided by UCLA Anderson School of Business as of March 2020 and the California Department of Finance as of April 2020.

The UCLA and Department of Finance wage forecasts project the statewide ratio of total wages to total employment. If job losses during an economic slowdown are greater among lower wage workers, these forecasts can be artificially high for projecting the average increase in wages for the typical worker. The WCIRB analyses of wage growth in recent prior recessions show that economic forecasts of recession year wage growth decrease over time and notably there was a steady and significant difference between the mean and median wage growth during the Great Recession.⁸ Given this information, the projected wage growth for 2020 in this filing was adjusted downward by 0.8% based on the average difference in mean and median wage growth during the Great Recession.

Claim Frequency. Earlier this year, the WCIRB published a study of the historical impact of prior economic slowdowns on claim frequency.⁹ The study showed that during periods of economic slowdown, declines in indemnity claim frequency accelerate but the proportion of indemnity claims involving cumulative trauma¹⁰ increases. The WCIRB forecasts frequency changes using an econometric model developed based on a long-term, forty-year history of California frequency changes in relation to changes in economic and other claims-related factors including the proportion of cumulative trauma claims.¹¹ The WCIRB's projected changes in indemnity claim frequency included in this filing reflect UCLA Anderson's current (June 2020) economic forecasts of employment levels as well as a projected increase in the proportion of cumulative injury claims consistent with that of the last two economic recessions.

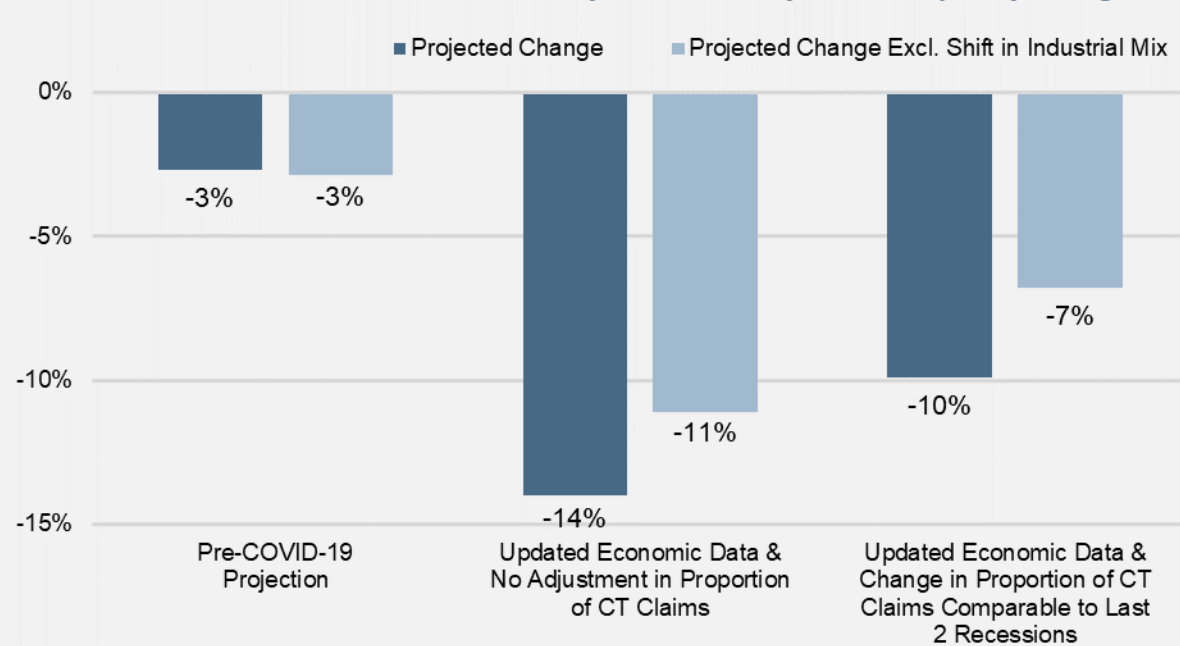
Chart 11 shows projected accident year 2020 indemnity claim frequency changes under alternative assumptions both for overall claim frequency and for frequency excluding the impact of shifts in industrial mix and excluding the impact of COVID-19 claims. The 7% estimated frequency decline which, as shown in Chart 11 reflects the latest economic forecasts excluding the impact of shifts in industrial mix and an assumed increase in cumulative trauma claims consistent with the average of the last two recession is the estimate reflected in the WCIRB's pure premium rate projection. As shown in Chart 11, the dramatic economic slowdown in California is expected to have a major impact on 2020 claim frequency in California even with a projected increase in the proportion of cumulative trauma claims.

⁸ See Item AC20-08-04 of the August 4, 2020 WCIRB Actuarial Committee meeting for an analysis of wage growth patterns during recessionary periods.

⁹ *Impact of Economic Downturn on California Workers' Compensation Claim Frequency*, WCIRB, June 2020.

¹⁰ See *The World of Cumulative Trauma Claims* (WCIRB, October 2018) for the WCIRB's most recent published report on cumulative trauma claims in California.

¹¹ Brooks, Ward, "California Workers Compensation Benefit Utilization – A Study of Changes in Frequency and Severity in Response to Changes in Statutory Workers Compensation Benefit Levels," *Proceedings of the Casualty Actuarial Society*, Volume LXXXVI, 1999, pp. 80-262.

Chart 11 – Alternative Accident Year 2020 Projected Indemnity Claim Frequency Change

Source: WCIRB frequency model and economic forecasts from UCLA Anderson as of June 2020.
Excludes projections of COVID-19 claims.

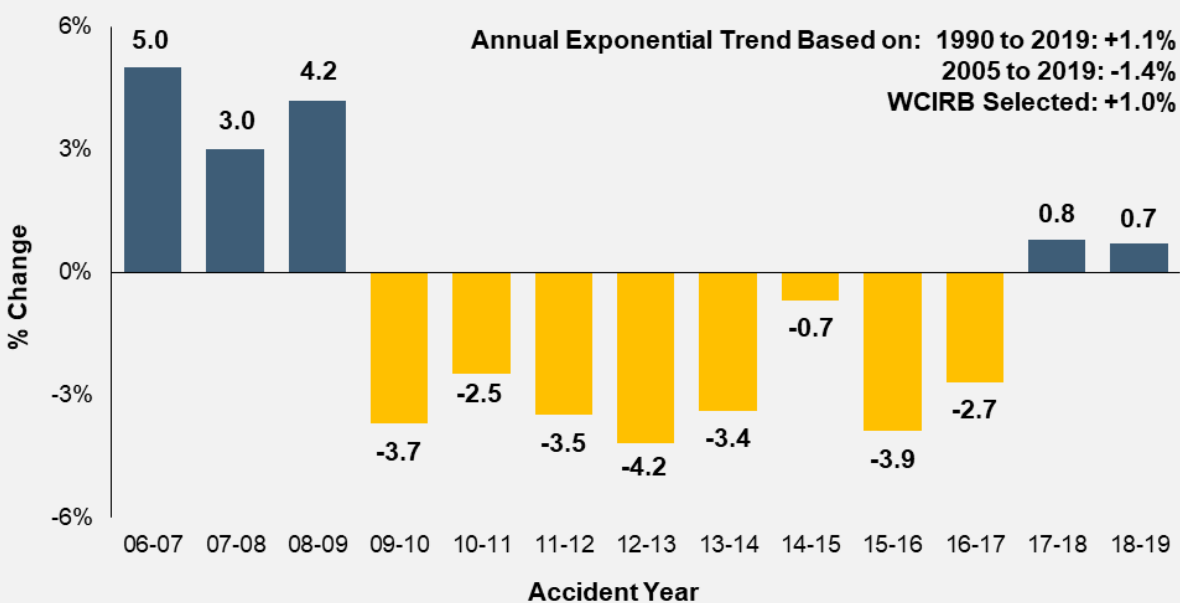
Claim Severities. As shown in Charts 5 and 6 above, following the enactment of SB 863, average claim severities have until recently declined. Chart 12 shows the WCIRB's estimated ultimate indemnity losses per indemnity claim adjusted to a current "on-level" basis for the impact of wage inflation, statutory benefit changes and reforms. Chart 13 shows similar information for medical on-level losses. Over the last two years, there have been indicators of a modest increase, particularly for indemnity.

Average claim severities in California have generally increased during recent recessionary periods. Studies have shown that temporary disability duration, in particular, tends to increase during a recession.¹² In addition, the COVID-19 pandemic and resultant stay-at-home order have resulted in significant delays in medical treatment including that provided to injured workers. A WCIRB preliminary analysis shows that delays in medical treatment on a claim can significantly impact both future indemnity and medical costs.¹³ For all these reasons, the WCIRB has projected future claim severity growth at levels above that of the average post-SB 863 level.

¹² Victor, Richard A., and Savych, Bogdan, "Recession, Fear of Job Loss, and Return to Work," Workers Compensation Research Institute, April 2010, WC-10-03.

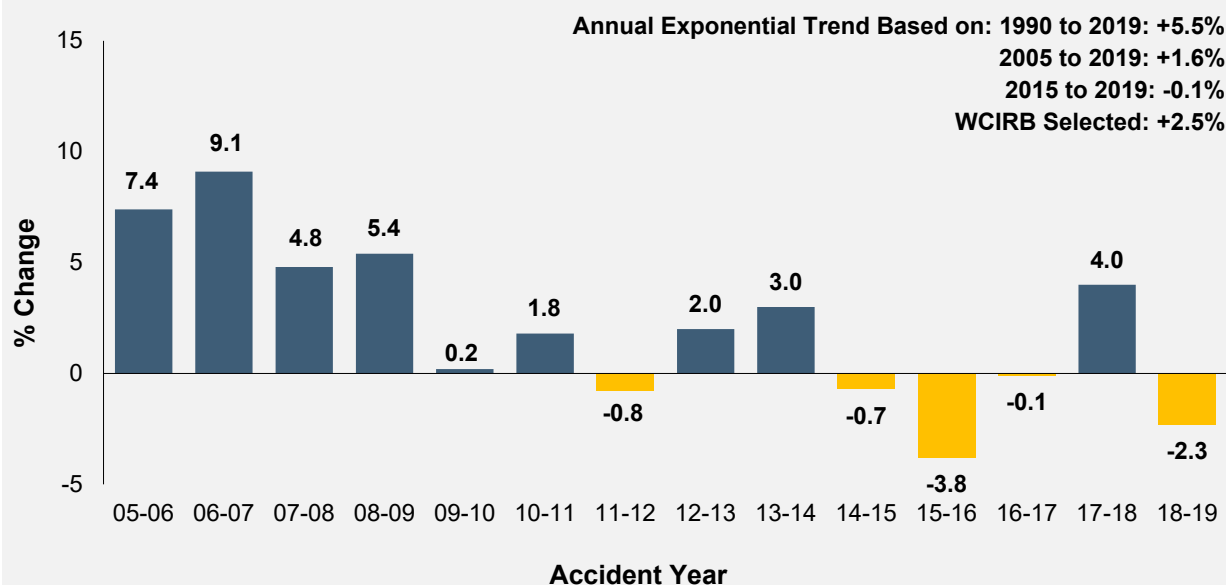
¹³ See Item AC20-08-05 of the August 10, 2020 WCIRB Actuarial Committee Agenda for an analysis of the potential impact of delays in medical treatments on future claim costs.

**Chart 12 – WCIRB Estimated Change in Indemnity On-Level Severity
Based on Experience as of March 31, 2020**



Source: WCIRB projections of ultimate indemnity losses based on reported loss and claim patterns adjusted to an on-level basis.

**Chart 13 – WCIRB Estimated Change in Medical On-Level Severity
Based on Experience as of March 31, 2020**



Source: WCIRB projections of ultimate medical losses based on reported loss and claim patterns adjusted to an on-level basis. Cost amounts exclude the cost of medical cost containment programs.

- **COVID-19 Claims.** The COVID-19 pandemic began to emerge in California in the early part of 2020. In the early weeks of the pandemic, even without the presence of a legal presumption of

compensability in the workers' compensation system for COVID-19-related illnesses, many claims were filed, particularly by first responders and healthcare workers.

On May 6, 2020, Governor Newsom issued Executive Order N-62-20 providing for a rebuttable presumption of compensability for all workers directed by their employer to work outside their home. In May 2020, the WCIRB estimated that the statewide cost of claims projected to be filed during the effective period of the rebuttable presumption provided in the Governor's Executive Order was \$1.2 billion.¹⁴ While the term of the Governor's Order has expired, workers' compensation claims are continuing to be filed and several bills re-establishing a legal presumption of compensability for COVID-19 claims for specified workers are under consideration by the Legislature. As of mid-July, data from the DWC indicates that almost 23,000 workers' compensation claims involving COVID-19 have been filed in California with the numbers increasing rapidly.

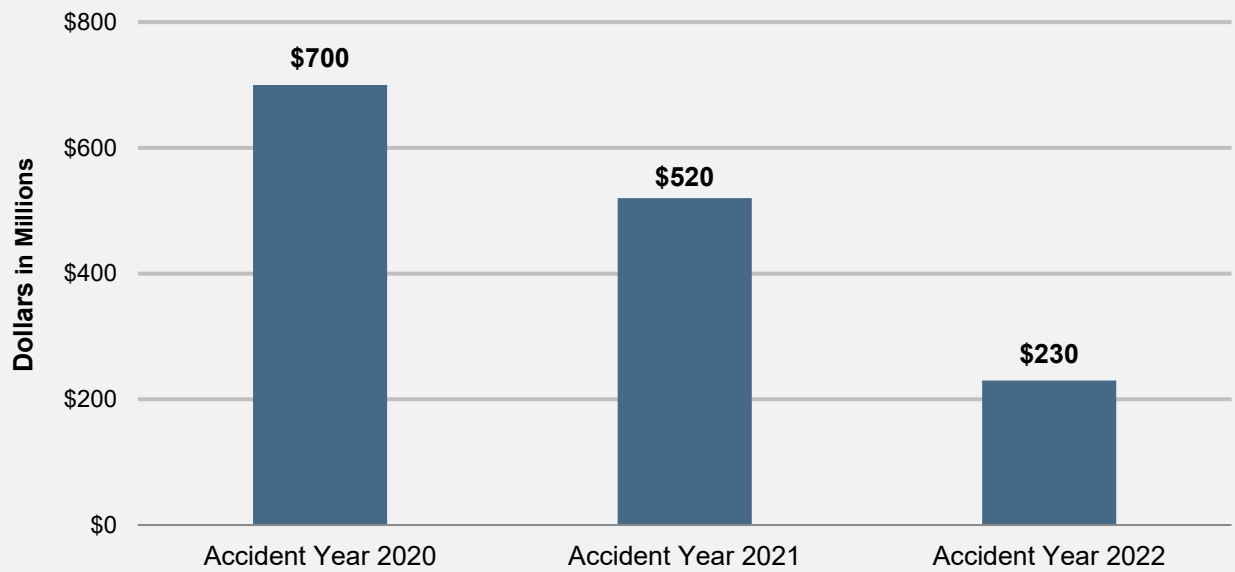
Given that the pandemic didn't begin to emerge in California until early 2020 and the 2020 advisory pure premium rates were approved by the Insurance Commissioner in November of 2019, those pure premium rates did not reflect provision for COVID-19 claim costs emerging in 2020. However, infectious disease experts and epidemiologists expect the pandemic to continue into 2021 and beyond. As a result, the WCIRB has estimated the impact of COVID-19 claims to be incurred on policies incepting between January 1, 2021 and August 31, 2021.

Limited information on projected COVID-19 infection rates in 2021 and 2022 is available. The WCIRB's projected COVID-19 claim costs for 2021 and 2022 were based on a series of reasonable assumptions predicated on a comprehensive review of a wide range of available COVID-19-related statistics and research. Section B, Appendix D details the WCIRB's projection of COVID-19 claim costs to be incurred against January 1, 2021 to August 31, 2021 policies. Section B, Appendix D also includes alternative projections based on varied underlying assumptions. Given the inherent uncertainty in the COVID-19 projection as well as the extreme fluidity of the pandemic, the WCIRB plans to re-assess its evaluation of COVID-19 claim costs to be incurred on January 1, 2021 through August 31, 2021 policies in September 2020 based on updated information and statistical models as well as reflect any legislation regarding COVID-19 if enacted by the California Legislature. If appropriate based on that re-evaluation, the WCIRB will amend the January 1, 2021 advisory pure premium rates proposed in this filing prior to the Insurance Commissioner's public hearing.

Chart 14 shows the WCIRB projections of accident years 2020, 2021 and 2022 COVID-19 loss and loss adjustment expenses for the insured system. These projections underlie the estimated 3.8% (\$0.06 per \$100 of payroll) cost impact of COVID-19 claims incurred against January 1, 2021 through August 31, 2021 policies computed in Section B, Appendix D and reflected in the advisory pure premium rates proposed in this filing.

¹⁴ *Evaluation of Cost Impact of Governor Newsom's Executive Order on Rebuttable Presumption for California COVID-19 Workers' Compensation Claims*, WCIRB, May 2020.

**Chart 14 – WCIRB Projected Cost of COVID-19 Claims for Insured System
By Year of Accident**

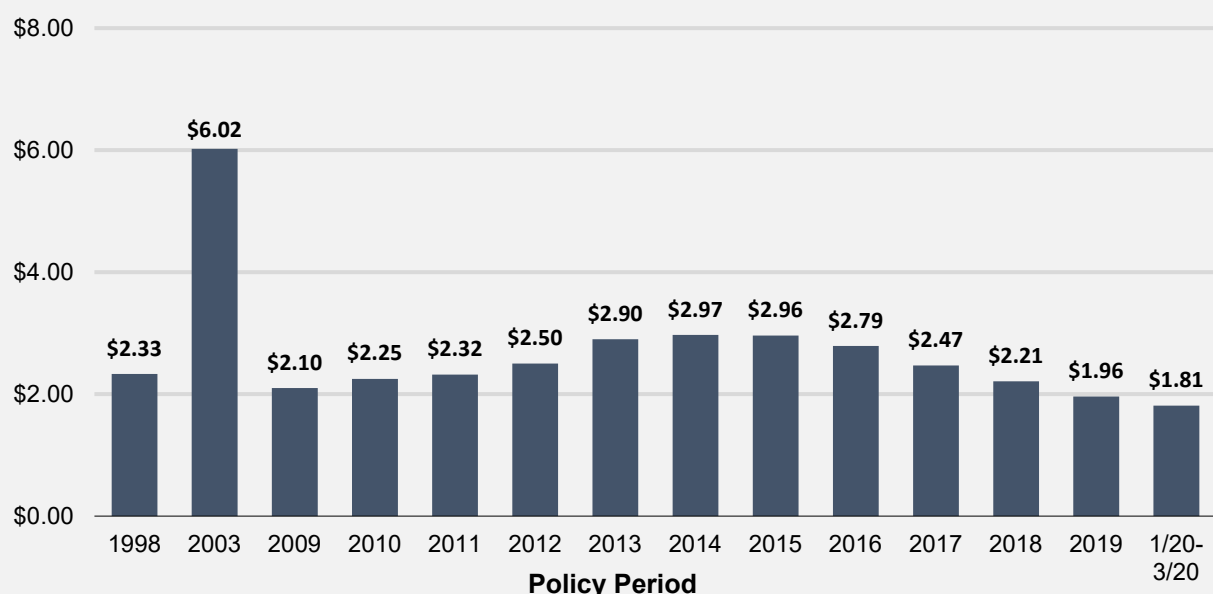


Source: Section B, Appendix D. Insured system only.

D. Supplemental Insurance Market Information

Chart 15 shows industry average charged rates by year. After a period of decline and following significant increases in underlying cost drivers, the industry average charged rates began to increase in 2010 and continued to grow through 2014. Subsequently, with favorable post-SB 863 medical trends emerging, average charged rates began to decline. As shown in Chart 15, the average rate charged during the first quarter of 2020 is almost 40% less than the average charged rate for 2014.

Chart 15 – Industry Average Charged Rate per \$100 of Payroll

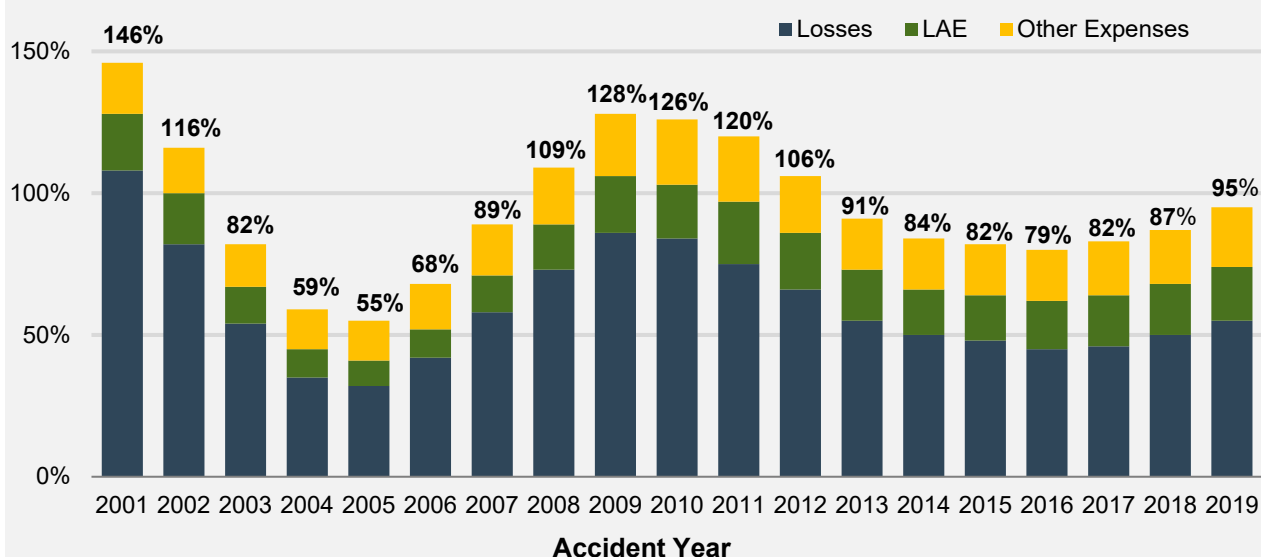


Source: Insurer unit statistical reports and WCIRB data calls. For consistency of comparison, average rates do not reflect the impact of new maximum payroll limitations applicable to five classifications effective in 2020.

Chart 16 shows the WCIRB's projected combined ratios of losses, loss adjustment expenses and other insurer expenses to earned premium by accident year.¹⁵ Rising claim costs, combined with relatively flat industry average charged rates, led to increasing accident year combined ratios beginning for 2006 through accident year 2009. Since 2010, higher insurer charged rates, modest claim cost trends, and lower insurer expense ratios have generally resulted in lower insurer combined loss and expense ratios. More recently, as insurer charged rates have decreased, projected combined ratios have increased in each of the last three years. Nevertheless, the accident year 2019 projected combined ratio of 97% still represents the seventh consecutive year of statewide projected combined ratios of below 100%.

¹⁵ These combined ratios reflect WCIRB estimates of ultimate losses and loss adjustment expenses by accident year relative to calendar year earned premiums. Insurers also report calendar year combined ratios, which reflect their paid losses and loss adjustment expenses and changes in reserves reported during a calendar year relative to calendar year earned premium. These two measures of combined ratios may differ. Also, these are combined underwriting results and, as such, do not reflect profits, federal income taxes, or investment income returns.

Chart 16 – WCIRB Projected Ultimate Accident Year Combined Loss and Expense Ratios as of March 31, 2020



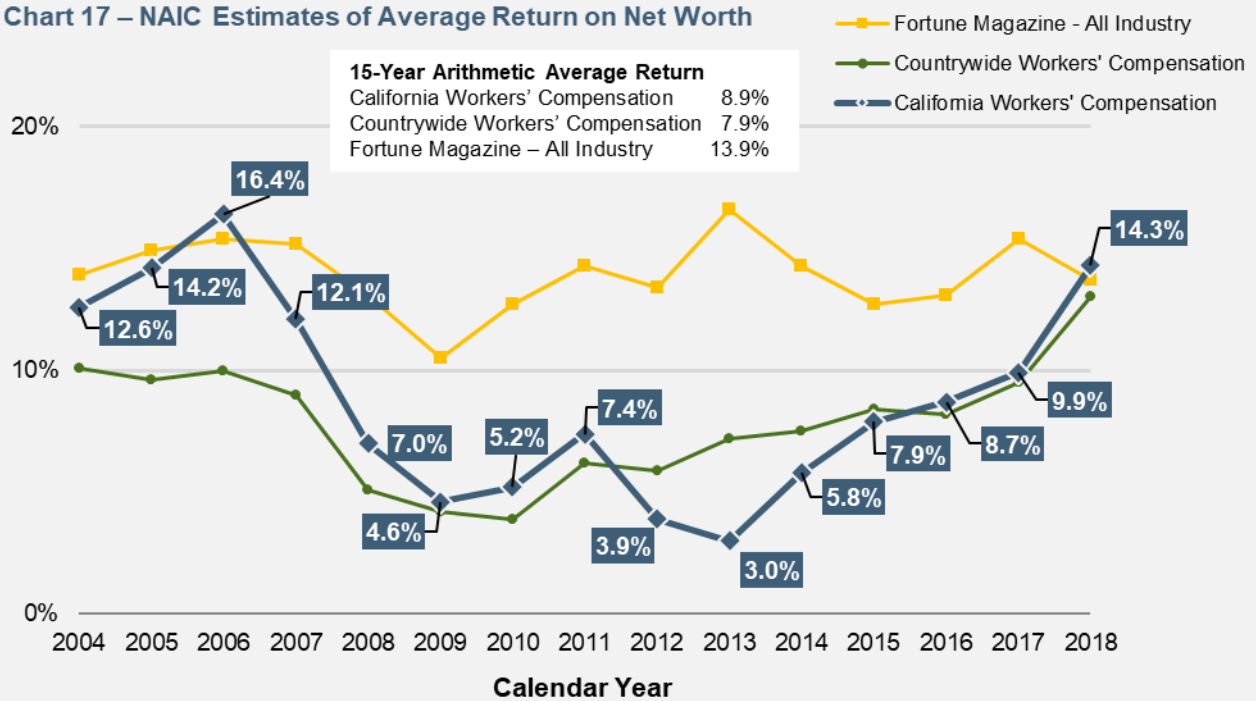
Source: WCIRB projections based on insurer aggregate financial data submissions to the WCIRB.
For accident years 2011-2019, MCCP costs are included in LAE rather than loss. For all other accident years, MCCP costs are included in loss.

The combined ratios shown in Chart 16 do not include the impact of investment income, federal income taxes or insurer profits. The National Association of Insurance Commissioners (NAIC) annually publishes a summary of total insurer profitability by line of insurance and state that reflect all these components based on calendar year information reported by each insurer to the NAIC. Chart 17 provides a summary of the information published by the NAIC over the last 15 years.

As shown in Chart 17, relatively high loss and expense ratios as well as relatively low investment returns had led to modest profitability (return on net worth) since 2008. The estimated calendar year 2018 return on net worth for California workers' compensation insurance, as reflected in the most recent NAIC report on profitability,¹⁶ is 14.3%. This is slightly above the average of the countrywide workers' compensation return of 13.0% and the Fortune Magazine all-industry average return of 13.7% shown in the NAIC report. The long-term 15-year average return on net worth for California workers' compensation as published by the NAIC is 8.9% as compared to 7.9% for countrywide workers' compensation and 13.9% for the Fortune Magazine all-industry average.

¹⁶ Report on Profitability by Line and State in 2018, NAIC, 2019.

Chart 17 – NAIC Estimates of Average Return on Net Worth



Source: NAIC Report on Profitability By Line and State in 2018.

E. Computation of Indicated Average January 1, 2021 Pure Premium Rate and Proposed Pure Premium Rates

The average proposed January 1, 2021 pure premium rate of \$1.56 per \$100 of payroll is based on the losses and loss adjustment expenses projected to be incurred on policies incepting between January 1, 2021 and August 31, 2021. This proposed average pure premium rate is 2.6% above the average of the approved January 1, 2020 advisory pure premium rates of \$1.52 per \$100 of payroll.

The proposed advisory pure premium rates are based on an evaluation of the loss, loss adjustment expense and premium experience of calendar and accident years through 2019, valued as of March 31, 2020. The principal methodologies and projections used by the WCIRB in calculating the average proposed pure premium rate are generally consistent with those reflected in the January 1, 2020 Pure Premium Rate Filing and are detailed in Section B of this filing. Specific methodologies and assumptions in the computation of the average proposed January 1, 2021 pure premium rate are detailed in Section B, Appendix A for loss development, Section B, Appendix B for loss trending, Section B, Appendix C for loss adjustment expenses, Section B, Appendix D for projected COVID-19 claim costs and Section C, Appendix B of the WCIRB's January 1, 2021 Regulatory Filing for the Experience Rating Off-Balance Factor.

For informational purposes, the WCIRB has computed a series of alternative January 1, 2021 projections over a wide range of alternative loss development, loss trending, loss adjustment expenses and COVID-19 claim cost projection methodologies (see Exhibits 3, 4, and 5). The assumptions underlying these alternative projection methodologies are discussed in detail in Section B, Appendices A, B, C and D.

The proposed January 1, 2021 advisory pure premium rate for each standard classification is based on the indicated change in the overall pure premium rate level as computed in Section B and the 2021 classification relativity for each standard classification. The computation of the 2021 classification relativities is based on the WCIRB's standard methodology and is described in detail in Section C, Appendix C of the WCIRB's January 1, 2021 Regulatory Filing submitted to the California Department of Insurance on June 25, 2020. The proposed advisory pure premium rate for each standard classification includes the WCIRB's estimated relativity of COVID-19 claim costs by classification, which is detailed in Section A, Appendix A.

Computation of Proposed and Industry Average Rates

A. Computation of Industry Average Filed Manual Rate as of July 1, 2020¹

1. The industry average filed manual rate as of July 1, 2019 was computed as described in Exhibit 1 to the Executive Summary of the WCIRB's January 1, 2020 Pure Premium Rate Filing.²
2. The industry average filed manual rate as of July 1, 2020 was determined by adjusting the July 1, 2019 industry filed manual rate by the average change in filed manual rates by insurer from July 1, 2019 through July 1, 2020 as provided by the California Department of Insurance (CDI).

B. Computation of Industry Average Filed Pure Premium Rate as of July 1, 2020³

1. The industry average filed pure premium rate as of July 1, 2019 was computed as described in Exhibit 1 to the Executive Summary of the WCIRB's January 1, 2020 Pure Premium Rate Filing.⁴
2. The industry average filed pure premium rate as of July 1, 2020 was determined by adjusting the July 1, 2019 industry average filed pure premium rate by the average change in filed pure premium rates by insurer from July 1, 2019 through July 1, 2020 as provided by the CDI.

C. Computation of Proposed Average Pure Premium Rate

The industry average filed pure premium rate as of July 1, 2020 derived as described in paragraph B-2 above, is adjusted by the "Indicated Difference from Industry Average Filed Pure Premium Rate per \$100 of Payroll as of July 1, 2020" (line 7 of Section B, Exhibit 8) to produce the proposed average pure premium rate per \$100 of payroll for the January 1, 2021 to August 31, 2021 policy period.

D. Computation of Industry Average Charged Rate for the First Quarter of 2020

1. The average advisory pure premium rate for the first quarter of 2020 is estimated by extending the January 1, 2020 advisory pure premium rate for each classification by the reported payroll for the classification for all insurers.⁵ The resulting products by classification are summed and then divided by the total reported payroll for all classifications for all insurers.
2. The industry average charged rate for the first quarter of 2020 is estimated by multiplying (a) the average advisory pure premium rate for the first quarter of 2020, derived as described in paragraph D-1 above, by (b) the average policy year 2020 ratio of premium written at the industry average charged rate level to premium written at the advisory pure premium rate level based on the WCIRB's quarterly calls for experience⁶ through March 31, 2020.

¹ The average filed manual rate varies dramatically across insurers for a variety of reasons, including the mix of classifications written, underwriting practices, and use of rating plan adjustments. For example, an insurer with relatively high manual rates may, as a matter of underwriting practice, apply bigger schedule rating credits than an insurer with lower manual rates.

² The industry average filed manual and pure premium rates are based on a weighted average of filed rates by classification using WCIRB unit statistical data payroll from policies incepting November 2017 through October 2018. To facilitate consistency of comparison with the proposed January 1, 2021 advisory pure premium rates, the five classifications with new maximum payroll limitations effective January 1, 2020 had their payroll weights and industry average filed rates adjusted to a basis to reflect the new payroll limitations.

³ An insurer's filed pure premium rates are a function of the set of advisory pure premium rates referenced in its rate filing as well as the manner in which the rate filing was developed. An insurer with an average filed pure premium rate greater than the industry average filed pure premium rate may or may not have higher than average filed manual rates, as the insurer may choose to apply a relatively small expense loading to develop the manual rates filed with the CDI.

⁴ As discussed in paragraph A of this exhibit, this average rate includes adjustments to the payroll weights for the five classifications with new maximum payroll limitations effective January 1, 2020.

⁵ Similar to the industry average filed manual rates discussed in paragraph A of this exhibit, this average rate includes adjustments to the payroll weights for the five classifications with new maximum payroll limitations effective January 1, 2020.

⁶ Premiums reported on the WCIRB's quarterly calls for experience exclude the impact of deductible credits, retrospective rating plan adjustments and terrorism charges.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020**

NOTE: THE INDUSTRY AVERAGE FILED PURE PREMIUM RATE SHOWN BELOW FOR EACH CLASSIFICATION REFLECTS THE MIX OF INSURERS WRITING BUSINESS IN THAT CLASSIFICATION AS WELL AS THEIR UNDERWRITING AND RATE FILING PRACTICES. THE DIFFERENCES SHOWN BELOW ARE NOT NECESSARILY INDICATIVE OF FUTURE CHANGES IN ANY INDIVIDUAL INSURER'S FILED PURE PREMIUM RATE OR THE RATE IT WILL CHARGE ITS POLICYHOLDERS AS INSURERS MAY, AND OFTEN DO, FILE AND USE RATES OTHER THAN THOSE PROPOSED OR APPROVED BY THE COMMISSIONER.

Class Code	(1) Proposed January 1, 2021 Advisory Pure Premium Rates	(2) Approved January 1, 2020 Advisory Pure Premium Rates	(3) Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR (1)/(2)-1	(4) Industry Average Filed Pure Premium Rates as of July 1, 2020	(5) Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20 (1)/(4)-1
0005	5.15	5.32	-3%	6.07	-15%
0016	6.44	5.89	9%	7.69	-16%
0034	6.24	6.13	2%	7.00	-11%
0035	5.55	5.15	8%	6.59	-16%
0036	7.53	7.11	6%	8.44	-11%
0038	7.41	6.90	7%	10.99	-33%
0040	3.73	3.71	1%	4.56	-18%
0041	5.45	5.20	5%	6.01	-9%
0042	5.14	5.41	-5%	7.34	-30%
0044	4.09	3.12	31%	4.05	1%
0045	4.14	3.66	13%	5.03	-18%
0050	6.09	5.89	3%	6.02	1%
0079	3.33	3.50	-5%	4.98	-33%
0096	5.81	4.92	18%	5.63	3%
0106	10.91	10.15	7%	12.89	-15%
0171	5.78	5.81	-1%	6.58	-12%
0172	4.18	4.10	2%	4.83	-13%
0251	4.70	4.11	14%	5.63	-17%
0400	3.00	2.39	26%	2.25	33%
0401	7.02	6.54	7%	8.80	-20%
1122	2.63	3.11	-15%	4.72	-44%
1123	16.18	18.86	-14%	29.42	-45%
1124	4.54	5.25	-14%	8.98	-49%
1320	1.62	1.45	12%	1.58	3%
1322	3.89	3.22	21%	2.97	31%
1330	2.58	2.75	-6%	3.44	-25%
1438	4.55	4.39	4%	4.54	0%
1452	2.48	2.16	15%	2.03	22%
1463	2.93	2.93	0%	3.47	-16%
1624	4.75	4.81	-1%	6.78	-30%
1699	1.89	2.26	-16%	2.65	-29%
1701	3.14	3.26	-4%	4.22	-26%
1710	3.93	4.27	-8%	5.43	-28%
1741	3.34	3.45	-3%	4.95	-33%
1803	7.67	8.49	-10%	11.15	-31%
1925	9.48	9.16	3%	8.45	12%
2002	7.78	9.17	-15%	11.03	-29%
2003	6.35	6.09	4%	7.11	-11%
2014	4.61	4.22	9%	4.99	-8%
2030	3.74	3.72	1%	3.55	5%

Rates are per \$100 of payroll unless otherwise noted.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

<u>Class Code</u>	(1) <u>Proposed January 1, 2021 Advisory Pure Premium Rates</u>	(2) <u>Approved January 1, 2020 Advisory Pure Premium Rates</u>	(3) <u>Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR</u> (1)/(2)-1	(4) <u>Industry Average Filed Pure Premium Rates as of July 1, 2020</u>	(5) <u>Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20</u> (1)/(4)-1
2063	4.23	3.93	8%	4.00	6%
2081	12.30	11.53	7%	10.25	20%
2095	5.69	6.98	-18%	9.21	-38%
2102	5.21	4.80	9%	4.96	5%
2107	4.19	3.96	6%	5.03	-17%
2108	5.71	5.70	0%	6.28	-9%
2109	4.46	4.21	6%	5.29	-16%
2111	4.80	4.36	10%	4.93	-3%
2113	7.34	7.75	-5%	10.03	-27%
2116	5.36	4.88	10%	4.76	13%
2117	6.63	6.48	2%	8.10	-18%
2121	2.79	2.90	-4%	3.34	-16%
2123	6.00	6.29	-5%	6.41	-6%
2142	2.43	2.15	13%	2.35	3%
2163	6.40	5.83	10%	6.07	5%
2222	4.86	5.16	-6%	6.92	-30%
2362	14.57	16.23	-10%	17.67	-18%
2402	8.32	7.40	12%	7.25	15%
2413	5.03	4.63	9%	5.02	0%
2501	6.00	7.43	-19%	7.64	-21%
2570	9.81	10.57	-7%	12.41	-21%
2571	7.84	8.43	-7%	9.66	-19%
2576	5.33	5.37	-1%	7.02	-24%
2584	5.91	5.86	1%	7.51	-21%
2585	6.77	7.66	-12%	8.25	-18%
2589	4.24	4.48	-5%	5.15	-18%
2660	8.04	8.76	-8%	9.90	-19%
2683	5.10	5.30	-4%	5.68	-10%
2688	5.62	5.42	4%	4.70	20%
2702	18.81	19.41	-3%	27.10	-31%
2710	5.70	6.25	-9%	7.92	-28%
2727	10.70	9.63	11%	16.65	-36%
2731	4.83	4.50	7%	5.67	-15%
2757	7.86	8.65	-9%	10.68	-26%
2759	7.63	6.94	10%	8.23	-7%
2790	1.91	1.94	-2%	2.37	-19%
2797	7.97	7.83	2%	8.59	-7%
2806	5.19	5.52	-6%	7.90	-34%
2812	5.06	5.60	-10%	7.68	-34%
2819	7.71	8.11	-5%	8.68	-11%
2840	3.90	4.24	-8%	5.40	-28%
2842	6.31	6.91	-9%	8.84	-29%
2852	5.81	5.94	-2%	6.72	-14%
2881	5.80	7.03	-17%	8.47	-32%
2883	13.27	12.89	3%	13.67	-3%

Rates are per \$100 of payroll unless otherwise noted.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

Class Code	(1) Proposed January 1, 2021 Advisory Pure Premium Rates	(2) Approved January 1, 2020 Advisory Pure Premium Rates	(3) Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR (1)/(2)-1	(4) Industry Average Filed Pure Premium Rates as of July 1, 2020	(5) Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20 (1)/(4)-1
2915	5.66	5.89	-4%	8.04	-30%
2923	3.69	3.87	-5%	4.91	-25%
3018	2.97	2.70	10%	2.52	18%
3022	5.16	4.68	10%	5.13	1%
3030	7.21	7.18	0%	9.14	-21%
3039	5.53	5.52	0%	6.99	-21%
3040	6.95	6.98	0%	9.18	-24%
3060	5.95	6.32	-6%	6.75	-12%
3066	4.36	4.06	7%	4.48	-3%
3070	0.36	0.31	16%	0.31	16%
3076	5.34	4.97	7%	6.56	-19%
3081	7.84	7.92	-1%	8.41	-7%
3082	13.89	14.35	-3%	16.56	-16%
3085	8.25	8.02	3%	9.11	-9%
3099	3.50	3.56	-2%	4.30	-19%
3110	5.77	5.89	-2%	5.59	3%
3131	4.27	4.22	1%	5.00	-15%
3146	2.76	3.06	-10%	3.60	-23%
3152	3.18	3.31	-4%	3.05	4%
3165	3.78	3.94	-4%	4.29	-12%
3169	3.67	3.74	-2%	4.91	-25%
3175	3.14	3.40	-8%	4.51	-30%
3178	1.98	2.16	-8%	2.37	-16%
3179	3.23	3.18	2%	3.12	4%
3180	4.96	5.74	-14%	7.12	-30%
3220	2.36	2.50	-6%	3.56	-34%
3241	3.54	3.36	5%	3.92	-10%
3257	4.89	4.70	4%	6.09	-20%
3339	6.49	6.66	-3%	6.98	-7%
3365	4.26	4.06	5%	5.97	-29%
3372	5.18	4.75	9%	5.50	-6%
3383	3.39	3.16	7%	3.39	0%
3400	7.09	6.58	8%	7.43	-5%
3401	4.29	4.35	-1%	5.76	-26%
3501	5.70	5.72	0%	6.37	-11%
3507	4.15	4.05	2%	4.88	-15%
3560	2.93	3.06	-4%	3.74	-22%
3568	2.60	2.71	-4%	2.81	-7%
3569	1.81	1.78	2%	2.55	-29%
3570	3.72	3.95	-6%	4.36	-15%
3572	1.01	0.92	10%	0.93	9%
3573	1.27	1.30	-2%	1.54	-18%
3574	3.59	3.74	-4%	4.39	-18%
3577	1.35	1.29	5%	1.56	-13%
3612	2.90	2.91	0%	3.38	-14%

Rates are per \$100 of payroll unless otherwise noted.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

<u>Class Code</u>	(1) <u>Proposed January 1, 2021 Advisory Pure Premium Rates</u>	(2) <u>Approved January 1, 2020 Advisory Pure Premium Rates</u>	(3) <u>Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR</u> (1)/(2)-1	(4) <u>Industry Average Filed Pure Premium Rates as of July 1, 2020</u>	(5) <u>Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20</u> (1)/(4)-1
3620	6.07	6.23	-3%	8.13	-25%
3632	2.74	2.87	-5%	3.38	-19%
3634	2.79	2.89	-3%	3.38	-17%
3643	2.39	2.71	-12%	3.61	-34%
3647	5.00	5.48	-9%	4.67	7%
3651	2.52	2.52	0%	2.68	-6%
3681	0.75	0.75	0%	0.81	-7%
3682	1.23	1.20	3%	1.25	-2%
3683	1.61	2.10	-23%	2.89	-44%
3719	1.79	1.66	8%	1.51	19%
3724	3.94	3.71	6%	4.52	-13%
3726	2.31	2.91	-21%	3.89	-41%
3805	0.99	0.90	10%	0.84	18%
3808	3.92	4.97	-21%	4.02	-2%
3815	5.25	4.97	6%	5.91	-11%
3821	7.15	7.86	-9%	8.52	-16%
3828	3.36	3.13	7%	4.05	-17%
3830	1.71	1.71	0%	2.71	-37%
3831	2.93	3.02	-3%	2.88	2%
3840	3.85	4.13	-7%	4.91	-22%
4000	2.50	2.53	-1%	3.12	-20%
4034	5.07	5.43	-7%	6.48	-22%
4036	4.41	4.67	-6%	5.21	-15%
4038	5.59	5.60	0%	6.32	-12%
4041	3.32	3.79	-12%	4.15	-20%
4049	3.14	3.38	-7%	4.30	-27%
4111	2.53	2.55	-1%	2.88	-12%
4112	0.48	0.50	-4%	0.57	-16%
4114	2.65	2.91	-9%	3.98	-33%
4130	6.00	5.67	6%	7.21	-17%
4150	2.69	2.75	-2%	3.55	-24%
4239	2.92	3.13	-7%	4.27	-32%
4240	8.58	8.13	6%	6.72	28%
4243	3.67	3.50	5%	4.05	-9%
4244	4.44	4.88	-9%	5.03	-12%
4250	4.06	4.01	1%	4.42	-8%
4251	3.79	4.31	-12%	4.84	-22%
4279	5.02	5.33	-6%	6.62	-24%
4283	2.89	3.28	-12%	3.49	-17%
4286	6.42	6.29	2%	7.02	-9%
4295	6.20	5.94	4%	7.11	-13%
4297	0.27	0.22	23%	0.24	13%
4299	4.08	3.75	9%	4.60	-11%
4304	6.55	6.40	2%	6.79	-4%
4312	4.31	3.44	25%	4.23	2%

Rates are per \$100 of payroll unless otherwise noted.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

Class Code	(1) Proposed January 1, 2021 Advisory Pure Premium Rates	(2) Approved January 1, 2020 Advisory Pure Premium Rates	(3) Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR (1)/(2)-1	(4) Industry Average Filed Pure Premium Rates as of July 1, 2020	(5) Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20 (1)/(4)-1
4351	2.78	2.73	2%	2.83	-2%
4354	2.30	2.40	-4%	2.72	-15%
4361	1.90	2.12	-10%	2.19	-13%
4362	1.81	1.57	15%	1.66	9%
4410	6.21	6.65	-7%	7.97	-22%
4420	8.54	7.82	9%	9.26	-8%
4432	3.00	2.55	18%	2.94	2%
4470	1.97	2.10	-6%	3.04	-35%
4478	4.79	5.49	-13%	6.06	-21%
4492	5.51	5.62	-2%	6.72	-18%
4494	5.70	6.20	-8%	6.84	-17%
4495	3.25	4.12	-21%	4.81	-32%
4496	5.94	6.16	-4%	7.48	-21%
4497	3.83	4.52	-15%	5.15	-26%
4498	3.89	4.40	-12%	5.58	-30%
4499	5.81	7.03	-17%	7.14	-19%
4511	0.51	0.51	0%	0.67	-24%
4512	0.27	0.24	13%	0.27	0%
4557	3.19	3.17	1%	3.67	-13%
4558	3.01	2.99	1%	3.50	-14%
4611	1.32	1.22	8%	1.51	-13%
4623	6.35	6.59	-4%	8.00	-21%
4635	2.49	2.62	-5%	2.19	14%
4665	6.58	6.03	9%	6.64	-1%
4683	4.17	4.60	-9%	5.16	-19%
4691	1.63	1.90	-14%	2.63	-38%
4692	1.51	1.47	3%	1.60	-6%
4717	3.87	3.46	12%	4.09	-5%
4720	3.39	3.37	1%	3.52	-4%
4740	1.06	1.07	-1%	0.92	15%
4771	1.39	1.47	-5%	1.39	0%
4828	2.29	2.93	-22%	2.83	-19%
4829	1.52	1.58	-4%	2.30	-34%
4831	4.25	4.49	-5%	6.00	-29%
4983	3.23	3.51	-8%	4.12	-22%
5020	3.76	3.77	0%	5.40	-30%
5027	8.99	10.44	-14%	15.01	-40%
5028	4.60	4.61	0%	6.29	-27%
5029	5.28	5.04	5%	5.62	-6%
5040	9.24	9.18	1%	11.05	-16%
5057	4.87	5.78	-16%	7.27	-33%
5059	9.53	9.33	2%	11.69	-18%
5102	6.05	7.03	-14%	8.51	-29%
5107	4.52	4.42	2%	6.95	-35%
5108	8.47	9.12	-7%	11.05	-23%

Rates are per \$100 of payroll unless otherwise noted.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

Class Code	(1) Proposed January 1, 2021 Advisory Pure Premium Rates	(2) Approved January 1, 2020 Advisory Pure Premium Rates	(3) Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR (1)/(2)-1	(4) Industry Average Filed Pure Premium Rates as of July 1, 2020	(5) Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20 (1)/(4)-1
5128	1.34	1.37	-2%	1.64	-18%
5129*	0.66	0.71	-7%	N/A	N/A
5130*	1.05	0.94	12%	N/A	N/A
5140	1.61	1.73	-7%	2.29	-30%
5146	4.81	4.60	5%	6.04	-20%
5160	1.83	1.88	-3%	1.81	1%
5183	5.49	5.34	3%	6.84	-20%
5184	2.37	2.47	-4%	3.05	-22%
5185	4.83	5.25	-8%	7.33	-34%
5186	2.30	2.18	6%	2.53	-9%
5187	2.53	2.59	-2%	3.51	-28%
5190	4.11	4.15	-1%	5.16	-20%
5191	2.36	2.48	-5%	2.64	-11%
5192	3.65	3.91	-7%	3.64	0%
5193*	1.23	1.40	-12%	N/A	N/A
5195	3.25	3.21	1%	5.39	-40%
5201	6.91	6.96	-1%	8.91	-22%
5205	4.19	4.72	-11%	6.21	-33%
5212	5.73	6.31	-9%	7.69	-25%
5213	4.53	4.41	3%	5.88	-23%
5214	4.63	4.43	5%	5.63	-18%
5222	5.96	4.99	19%	5.42	10%
5225	5.15	4.93	4%	6.18	-17%
5348	4.78	4.40	9%	5.66	-16%
5403	10.93	11.62	-6%	15.08	-28%
5432	4.45	4.27	4%	5.89	-24%
5436	3.95	3.91	1%	6.05	-35%
5443	4.63	4.84	-4%	6.56	-29%
5446	5.31	5.43	-2%	7.86	-32%
5447	2.54	2.92	-13%	4.12	-38%
5467	7.84	8.74	-10%	11.38	-31%
5470	3.83	3.38	13%	3.85	-1%
5473	10.12	10.30	-2%	13.34	-24%
5474	8.86	7.86	13%	10.41	-15%
5479	5.71	5.05	13%	6.32	-10%
5482	3.99	3.43	16%	5.05	-21%
5484	8.81	9.22	-4%	14.19	-38%
5485	6.29	6.44	-2%	8.24	-24%
5506	4.07	4.73	-14%	6.63	-39%
5507	3.76	4.58	-18%	5.44	-31%
5538	5.23	4.92	6%	6.82	-23%
5542	3.01	3.07	-2%	3.88	-22%
5552	23.15	24.27	-5%	32.63	-29%
5553	8.58	8.52	1%	13.02	-34%
5606	0.84	0.75	12%	0.87	-3%

Rates are per \$100 of payroll unless otherwise noted.

* This classification is recently established and there is no reported payroll available yet to derive an industry average filed pure premium rate.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

Class Code	(1) Proposed January 1, 2021 Advisory Pure Premium Rates	(2) Approved January 1, 2020 Advisory Pure Premium Rates	(3) Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR (1)/(2)-1	(4) Industry Average Filed Pure Premium Rates as of July 1, 2020	(5) Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20 (1)/(4)-1
5610	3.54	3.51	1%	4.41	-20%
5632	10.93	11.62	-6%	15.47	-29%
5633	4.45	4.27	4%	5.65	-21%
5650	5.73	5.64	2%	7.79	-26%
5951	0.64	0.63	2%	0.70	-9%
6003	13.82	14.42	-4%	14.28	-3%
6011	6.12	6.10	0%	7.11	-14%
6204	6.82	7.50	-9%	10.29	-34%
6206	2.73	2.17	26%	2.78	-2%
6213	1.75	1.76	-1%	2.21	-21%
6216	2.73	2.78	-2%	3.77	-28%
6218	5.81	5.15	13%	6.82	-15%
6220	2.68	3.03	-12%	4.90	-45%
6233	2.08	1.95	7%	2.16	-4%
6235	3.17	3.12	2%	3.75	-15%
6237	1.70	1.48	15%	1.81	-6%
6251	4.64	4.95	-6%	5.32	-13%
6258	5.49	5.80	-5%	6.80	-19%
6307	8.05	7.76	4%	9.91	-19%
6308	3.11	3.73	-17%	6.56	-53%
6315	4.78	4.16	15%	6.03	-21%
6316	3.98	4.76	-16%	6.65	-40%
6325	3.10	2.96	5%	4.31	-28%
6361	3.98	4.40	-10%	5.74	-31%
6364	5.07	5.33	-5%	6.64	-24%
6400	5.35	5.40	-1%	7.83	-32%
6504	6.22	6.09	2%	7.77	-20%
6834	5.10	4.55	12%	5.33	-4%
7133	2.88	3.29	-12%	4.43	-35%
7198	7.72	6.89	12%	4.39	76%
7207	7.73	7.04	10%	10.19	-24%
7219	7.08	7.12	-1%	8.01	-12%
7227	8.35	6.97	20%	9.07	-8%
7232	8.99	9.24	-3%	13.13	-32%
7248	1.46	1.22	20%	1.52	-4%
7272	6.36	6.03	5%	7.40	-14%
7332	3.15	3.41	-8%	3.19	-1%
7360	5.62	5.58	1%	6.69	-16%
7365	6.06	5.63	8%	7.20	-16%
7382	6.66	6.70	-1%	6.84	-3%
7392	5.06	4.61	10%	5.76	-12%
7403	5.47	5.91	-7%	5.93	-8%
7405	1.94	1.66	17%	1.56	24%
7409	7.80	6.58	19%	8.76	-11%
7410	4.96	4.20	18%	5.77	-14%

Rates are per \$100 of payroll unless otherwise noted.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

Class Code	(1) Proposed January 1, 2021 Advisory Pure Premium Rates	(2) Approved January 1, 2020 Advisory Pure Premium Rates	(3) Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR (1)/(2)-1	(4) Industry Average Filed Pure Premium Rates as of July 1, 2020	(5) Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20 (1)/(4)-1
7421	1.60	1.44	11%	1.21	32%
7424	1.75	1.72	2%	1.75	0%
7428	3.45	3.32	4%	3.63	-5%
7429	2.50	2.31	8%	3.01	-17%
7500	3.19	2.94	9%	3.03	5%
7515	1.14	0.90	27%	1.00	14%
7520	3.19	2.94	9%	3.13	2%
7538	2.68	3.23	-17%	4.04	-34%
7539	1.65	1.41	17%	1.55	6%
7580	2.97	2.71	10%	2.92	2%
7600	8.15	6.65	23%	6.27	30%
7601	3.66	4.00	-9%	4.37	-16%
7605	2.65	2.88	-8%	3.72	-29%
7607	0.32	0.33	-3%	0.34	-6%
7610	0.49	0.42	17%	0.44	11%
7706	4.83	4.90	-1%	7.42	-35%
7707**	231.92	255.18	-9%	462.96	-50%
7720	2.39	2.60	-8%	2.60	-8%
7721	3.48	3.16	10%	4.05	-14%
7722 ‡	110.33	119.54	-8%	N/A	N/A
7855	3.26	3.26	0%	3.90	-16%
8001	4.59	4.58	0%	5.80	-21%
8004	3.64	3.58	2%	4.22	-14%
8006	3.79	3.61	5%	3.86	-2%
8008	2.43	2.29	6%	2.50	-3%
8010*	3.20	2.97	8%	N/A	N/A
8013	1.33	1.30	2%	1.57	-15%
8015	3.81	3.72	2%	5.24	-27%
8017	2.92	3.00	-3%	2.98	-2%
8018	5.46	5.16	6%	5.41	1%
8019	1.90	1.94	-2%	1.90	0%
8021	6.25	7.59	-18%	8.86	-29%
8028	4.29	3.98	8%	4.84	-11%
8031	5.36	4.79	12%	5.54	-3%
8032	4.84	5.10	-5%	6.59	-27%
8039	2.45	2.18	12%	2.23	10%
8041	6.76	7.06	-4%	7.89	-14%
8042	3.41	2.95	16%	3.56	-4%
8046	3.58	3.56	1%	3.55	1%
8057	3.90	4.65	-16%	6.56	-41%

Rates are per \$100 of payroll unless otherwise noted.

* This classification is recently established and there is no reported payroll available yet to derive an industry average filed pure premium rate.

** The rate for classification 7707 is per capita.

‡ The rate for classification 7722 is per capita; this classification does not have sufficient exposure available to derive an industry average filed pure premium rate.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

Class Code	(1) Proposed January 1, 2021 Advisory Pure Premium Rates	(2) Approved January 1, 2020 Advisory Pure Premium Rates	(3) Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR (1)/(2)-1	(4) Industry Average Filed Pure Premium Rates as of July 1, 2020	(5) Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20 (1)/(4)-1
8059	3.07	3.22	-5%	4.30	-29%
8060	1.86	1.76	6%	2.25	-17%
8061	3.13	3.09	1%	2.86	9%
8062	1.25	1.16	8%	1.38	-9%
8063	3.26	3.16	3%	3.33	-2%
8064	3.59	3.70	-3%	3.40	6%
8065	2.28	2.10	9%	2.89	-21%
8066	1.27	1.14	11%	1.23	3%
8071	1.26	1.26	0%	1.39	-9%
8078	1.44	1.66	-13%	2.19	-34%
8102	1.42	1.31	8%	1.40	1%
8106	4.94	5.86	-16%	7.27	-32%
8107	2.31	2.28	1%	2.69	-14%
8110	2.60	2.06	26%	1.91	36%
8116	2.84	2.97	-4%	3.41	-17%
8117	3.71	3.98	-7%	4.63	-20%
8209	5.77	5.59	3%	6.93	-17%
8215	7.64	7.03	9%	8.44	-9%
8227	4.20	4.46	-6%	5.83	-28%
8232	6.02	5.94	1%	6.50	-7%
8267	7.11	6.68	6%	7.58	-6%
8278***	147.35	113.45	30%	155.31	-5%
8286	5.49	5.28	4%	7.21	-24%
8290	2.77	2.71	2%	3.16	-12%
8291	4.48	4.20	7%	4.85	-8%
8292	8.08	8.14	-1%	9.16	-12%
8293	10.05	9.33	8%	12.22	-18%
8304	7.42	6.98	6%	9.51	-22%
8324	3.25	3.31	-2%	3.69	-12%
8350	4.76	4.53	5%	5.08	-6%
8370*	2.14	2.76	-22%	N/A	N/A
8387	3.39	3.64	-7%	4.52	-25%
8388	5.26	4.78	10%	5.81	-9%
8389	3.35	3.42	-2%	4.05	-17%
8390	3.11	3.29	-5%	4.85	-36%
8391	2.95	2.78	6%	2.93	1%
8392	2.99	3.13	-4%	4.10	-27%
8393	2.58	2.50	3%	3.22	-20%
8397	2.73	3.06	-11%	4.31	-37%
8400	2.24	2.07	8%	2.40	-7%
8500	6.03	6.40	-6%	7.95	-24%
8601	0.34	0.27	26%	0.33	3%
8631***	4.86	3.39	43%	5.76	-16%
8720	1.46	1.22	20%	1.69	-14%
8729	0.90	1.01	-11%	1.89	-52%

Rates are per \$100 of payroll unless otherwise noted.

* This classification is recently established and there is no reported payroll available yet to derive an industry average filed pure premium rate.

*** The rate for classification 8278 is per race. The rate for classification 8631 is per occupied stall day.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

Class Code	(1) Proposed January 1, 2021 Advisory Pure Premium Rates	(2) Approved January 1, 2020 Advisory Pure Premium Rates	(3) Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR (1)/(2)-1	(4) Industry Average Filed Pure Premium Rates as of July 1, 2020	(5) Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20 (1)/(4)-1
8740	0.94	1.01	-7%	1.54	-39%
8741	0.12	0.10	20%	0.15	-20%
8742	0.36	0.33	9%	0.42	-14%
8743	0.20	0.21	-5%	0.23	-13%
8744*	0.40	0.33	21%	N/A	N/A
8745	6.87	7.20	-5%	7.70	-11%
8746*	0.36	0.33	9%	N/A	N/A
8748	0.96	0.80	20%	0.98	-2%
8749	0.23	0.21	10%	0.30	-23%
8755	0.86	0.83	4%	1.30	-34%
8800	2.86	2.91	-2%	3.35	-15%
8801	0.63	0.60	5%	0.78	-19%
8803	0.16	0.12	33%	0.14	14%
8804	3.06	2.78	10%	3.71	-18%
8806	3.97	4.26	-7%	5.37	-26%
8807	0.34	0.29	17%	0.33	3%
8808	0.48	0.38	26%	0.43	12%
8810	0.24	0.23	4%	0.30	-20%
8811*	0.24	0.23	4%	N/A	N/A
8812*	0.24	0.23	4%	N/A	N/A
8813	0.60	0.55	9%	0.60	0%
8818	0.73	0.66	11%	0.70	4%
8820	0.41	0.40	2%	0.46	-11%
8821	0.98	0.92	7%	1.32	-26%
8822	0.54	0.48	13%	0.54	0%
8823	3.72	3.70	1%	4.51	-18%
8827	3.69	3.96	-7%	4.56	-19%
8829	3.60	3.69	-2%	4.42	-19%
8830	1.60	1.35	19%	1.62	-1%
8831	1.62	1.46	11%	2.23	-27%
8834	0.96	0.74	30%	0.88	9%
8838	1.17	1.03	14%	1.25	-6%
8839	0.98	0.77	27%	0.97	1%
8840	0.40	0.38	5%	0.38	5%
8846	1.48	1.67	-11%	1.85	-20%
8847	8.11	8.11	0%	10.17	-20%
8850	2.25	2.40	-6%	3.36	-33%
8851	3.41	3.23	6%	3.92	-13%
8852	2.06	2.11	-2%	2.82	-27%
8859	0.06	0.06	0%	0.06	0%
8868	0.80	0.66	21%	0.80	0%
8870*	1.05	0.94	12%	N/A	N/A
8871*	0.24	N/A	N/A	N/A	N/A
8875	0.79	0.75	5%	0.97	-19%
9007	3.20	2.95	8%	3.59	-11%

Rates are per \$100 of payroll unless otherwise noted.

* This classification is recently established and there is no reported payroll available yet to derive an industry average filed pure premium rate.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

Class Code	(1) Proposed January 1, 2021 Advisory Pure Premium Rates	(2) Approved January 1, 2020 Advisory Pure Premium Rates	(3) Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR (1)/(2)-1	(4) Industry Average Filed Pure Premium Rates as of July 1, 2020	(5) Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20 (1)/(4)-1
9008	8.77	8.73	0%	9.69	-9%
9009	2.94	3.25	-10%	4.35	-32%
9010	4.08	4.20	-3%	5.00	-18%
9011	3.67	3.61	2%	4.82	-24%
9015	4.62	4.25	9%	5.77	-20%
9016	3.22	3.11	4%	4.17	-23%
9031	4.28	3.68	16%	4.83	-11%
9033	3.90	4.16	-6%	5.40	-28%
9043	1.60	1.35	19%	1.39	15%
9048	3.30	2.92	13%	3.47	-5%
9050	6.56	6.67	-2%	7.26	-10%
9053	1.61	1.60	1%	2.28	-29%
9054*	4.57	4.84	-6%	N/A	N/A
9059	2.53	2.15	18%	2.56	-1%
9060	3.74	3.73	0%	4.05	-8%
9061	3.17	2.72	17%	3.38	-6%
9066	2.73	3.10	-12%	3.71	-26%
9067	1.77	1.67	6%	2.08	-15%
9069	4.17	4.56	-9%	4.52	-8%
9070	5.29	5.69	-7%	5.85	-10%
9079	3.02	2.89	4%	3.29	-8%
9085	3.31	2.99	11%	4.13	-20%
9092	2.25	2.11	7%	2.65	-15%
9095	4.00	3.78	6%	5.58	-28%
9096	11.18	12.03	-7%	14.52	-23%
9097	3.54	3.63	-2%	4.65	-24%
9101	4.73	4.71	0%	5.93	-20%
9151	0.81	0.76	7%	0.95	-15%
9154	2.33	2.28	2%	2.65	-12%
9155	1.34	1.23	9%	1.58	-15%
9156	4.15	4.77	-13%	5.94	-30%
9180	2.90	2.72	7%	3.26	-11%
9181	10.30	10.45	-1%	10.82	-5%
9182	1.31	1.27	3%	1.58	-17%
9184	9.43	8.37	13%	9.72	-3%
9185	14.80	14.32	3%	23.74	-38%
9220	5.63	5.62	0%	6.89	-18%
9402	3.51	3.98	-12%	5.12	-31%
9403	6.09	6.64	-8%	6.65	-8%
9410	1.25	1.30	-4%	1.96	-36%
9420	7.14	6.11	17%	7.68	-7%
9422	1.67	1.58	6%	1.83	-9%
9424	5.41	5.75	-6%	6.49	-17%
9426	5.56	5.20	7%	6.91	-20%
9501	4.19	3.98	5%	4.76	-12%

Rates are per \$100 of payroll unless otherwise noted.

* This classification is recently established and there is no reported payroll available yet to derive an industry average filed pure premium rate.

**Comparison of Proposed January 1, 2021 Advisory Pure Premium Rates with Approved January 1, 2020
Advisory Pure Premium Rates and Industry Average Filed Pure Premium Rates as of July 1, 2020 (continued)**

<u>Class Code</u>	<u>(1) Proposed January 1, 2021 Advisory Pure Premium Rates</u>	<u>(2) Approved January 1, 2020 Advisory Pure Premium Rates</u>	<u>(3) Difference Between Proposed 1/1/21 APPR & Approved 1/1/20 APPR (1)/(2)-1</u>	<u>(4) Industry Average Filed Pure Premium Rates as of July 1, 2020</u>	<u>(5) Difference Between Proposed 1/1/21 APPR & Industry Avg Filed PPR as of 7/1/20 (1)/(4)-1</u>
9507	2.66	2.29	16%	3.14	-15%
9516	2.11	2.14	-1%	2.74	-23%
9519	6.75	6.65	2%	7.70	-12%
9521	5.01	4.29	17%	6.61	-24%
9522	6.24	7.33	-15%	8.53	-27%
9529	4.70	5.38	-13%	6.00	-22%
9531*	3.06	2.67	15%	N/A	N/A
9549	10.18	8.27	23%	8.12	25%
9552	8.02	8.11	-1%	11.08	-28%
9586	1.56	1.47	6%	1.87	-17%
9610	1.40	1.35	4%	1.49	-6%
9620	2.65	2.85	-7%	3.62	-27%

Rates are per \$100 of payroll unless otherwise noted.

* This classification is recently established and there is no reported payroll available yet to derive an industry average filed pure premium rate.

**Projected Loss Ratios for January 1, 2021 to August 31, 2021 Policies
Based on Alternative Loss Development Methodologies**

January 1, 2021 Filing Loss Development Methodology	Indemnity Loss Ratio	Medical Loss Ratio	Total Loss Ratio
Latest Year Paid Adjusted for SB 1160, Recent Pharmaceutical Cost Declines, and Changes in Claim Settlement Rates	0.278	0.340	0.618

Alternative Loss Development Methodologies¹	Indemnity Loss Ratio	Medical Loss Ratio	Total Loss Ratio
<u>Incurred Loss Development Methodologies</u>			
Three-Year Average (Unadjusted)	0.287	0.308	0.595
Latest Year (Unadjusted)	0.277	0.301	0.578
Three-Year Average Adjusted for Changes in Average Case Reserve Levels	0.277	0.306	0.583
Latest Year Adjusted for Changes in Insurer Mix	0.275	0.294	0.569
<u>Paid Loss Development Methodologies</u>			
Three-Year Average (Unadjusted)	0.304	0.368	0.672
Latest Year (Unadjusted)	0.287	0.351	0.638
Latest Year Adjusted for SB 1160 and Recent Pharmaceutical Cost Declines	—	0.349	—
Three-Year Average Adjusted for SB 1160, Recent Pharmaceutical Cost Declines, and Changes in Claim Settlement Rates	0.284	0.353	0.637
Latest Year Adjusted for SB 1160, Recent Pharmaceutical Cost Declines, and Changes in Claim Settlement Rates with Long-Term Incurred Development	0.282	0.341	0.623
Latest Year Adjusted for Changes in Insurer Mix	0.284	0.340	0.624
BF Paid to 27 Months; WCIRB Selected Method after 27 Months	0.275	0.341	0.616

¹ All loss development methodologies reflect a three-year average of paid loss development or a six-year average of incurred loss development applied from 111 months through 255 months and a six-year average of incurred loss development applied after 255 months as in the WCIRB's recommended methodology.

**Projected Loss Ratios for January 1, 2021 to August 31, 2021 Policies
Based on Alternative Trending Methodologies**

January 1, 2021 Filing Trending Methodology	Indemnity Loss Ratio	Medical Loss Ratio	Total Loss Ratio
Separate Projections of Frequency and Severity, Using WCIRB's Selected Frequency Changes and 1% Indemnity and 2.5% Medical Severity Trends, Applied to the Latest Two Years	0.278	0.340	0.618

Alternative Trending Methodologies	Indemnity Loss Ratio	Medical Loss Ratio	Total Loss Ratio
Separate Projections of WCIRB's Selected Frequency and Severity Trends Applied to the Latest Year	0.276	0.330	0.606
Separate Projections of Frequency Changes with No Increase in the Proportion of CT Claims and WCIRB's Selected Severity Trends Applied to the Latest Two Years	0.265	0.325	0.590
Separate Projections of Frequency Changes with an Increase in the Proportion of CT Claims Comparable to the Great Recession and WCIRB's Selected Severity Trends Applied to the Latest Two Years	0.291	0.356	0.647
Separate Projections of WCIRB's Selected Frequency and Long-Term (1990 to 2019) Severity Trends Applied to the Latest Two Years	0.279	0.369	0.648
Separate Projections of WCIRB's Selected Frequency and Short-Term (2015 to 2019) Severity Trends Applied to the Latest Two Years	0.261	0.316	0.577
2015 to 2019 On-Level Loss Ratio Exponential Trend Applied to Latest Two Years	0.259	0.318	0.577

ULAE to Loss Ratio Projections for January 1, 2021 to August 31, 2021 Policies

January 1, 2021 Filing ULAE Projection Methodology	Ratio of ULAE to Loss Based on Statewide with Private Insurer Average ULAE
Paid ULAE per Open Indemnity Claim Applied to the Latest Two Years	14.1%
Paid ULAE to Paid Losses Applied to the Latest Two Years	13.2%
Average of Open Indemnity Claim-Based and Paid Loss-Based Projections	13.7%

Alternative ULAE Projection Methodologies	Ratio of ULAE to Loss Based on Statewide with Private Insurer Average ULAE
Paid ULAE per Open Indemnity Claim Applied to the Latest Year	13.2%
Paid ULAE to Paid Losses Applied to the Latest Year	12.3%
Paid ULAE per Weighted Open Indemnity Claim Applied to the Latest Two Years	13.6%
Latest Two Calendar Year Paid ULAE to Loss Ratios	14.0%
Latest Calendar Year Paid ULAE to Loss Ratio	13.1%

ALAE¹ to Loss Ratio Projections for January 1, 2021 to August 31, 2021 Policies

January 1, 2021 Filing ALAE Projection Methodology	Ratio of ALAE to Loss Based on Statewide with Private Insurer Average ALAE
Projected Ultimate ALAE per Indemnity Claim – Trend Based on Growth in ALAE per Indemnity Claim and WCIRB Selected Frequency Changes Applied to the Latest Two Years	16.1%

Alternative ALAE Projection Methodologies	Ratio of ALAE to Loss Based on Statewide with Private Insurer Average ALAE
Projected Ultimate ALAE per Indemnity Claim – Trend Applied to the Latest Year	16.2%
Latest Year Paid ALAE Ratio Development Compared to Losses – Projection Based on Latest Two Years	17.2%
Latest Year Paid ALAE to Paid Indemnity Development Compared to Losses – Projection Based on Latest Two Years	16.5%

MCCP Cost to Loss Ratio Projections for January 1, 2021 to August 31, 2021 Policies

January 1, 2021 Filing MCCP Cost Projection Methodology	Statewide Ratio of MCCP to Loss
Projected Ultimate MCCP per Indemnity Claim – WCIRB Selected Frequency Changes and 0% MCCP Severity Trend Applied to the Latest Two Years	4.2%

Alternative MCCP Cost Projection Methodologies	Statewide Ratio of MCCP to Loss
Projected Ultimate MCCP per Indemnity Claim – WCIRB Selected Frequency Changes and 0% MCCP Severity Trend Applied to the Latest Year	4.1%
Projected Ultimate MCCP per Indemnity Claim – WCIRB Selected Frequency Changes and Average Ultimate Accident Year MCCP Severity Trend (-1.2%) Applied to the Latest Two Years	4.1%
Projected Ultimate MCCP per Indemnity Claim – WCIRB Selected Frequency Changes and Average Calendar Year MCCP Severity Trend (1.3%) Applied to the Latest Two Years	4.4%

¹ Excludes the cost of medical cost containment programs (MCCP).

Section A

Proposed Pure Premium Rates

This section sets forth the calculation of the proposed pure premium rates applicable to workers' compensation policies with an effective date on or after January 1, 2021. The pure premium rates shown in this section are based on the "Selected (Unlimited) Loss to Payroll Ratio" or, if applicable, the "Selected Loss to Payroll Ratio (Restricted to 25% Change)" shown on the classification relativity review sheets that were included in Section C, Appendix C of the WCIRB's January 1, 2021 Regulatory Filing submitted on June 25, 2020 (January 1, 2021 Regulatory Filing). The pure premium rates proposed in this section also include a provision for the cost of COVID-19 workers' compensation claims on January 1, 2021 to August 31, 2021 policies, which is computed in Section B, Appendix D and applied as discussed in Appendix A.

In order to determine the proposed pure premium rate for each classification prior to the application of the COVID-19 provision, the selected loss to payroll ratios in Section C, Appendix C of the January 1, 2021 Regulatory Filing are adjusted to reflect (a) the overall indicated difference in the level of losses projected for January 1, 2021 to August 31, 2021 policies relative to that reflected in the industry average filed pure premium rate level as of July 1, 2020 (as computed in Section B), segregated into its indemnity and medical components, (b) the inclusion of loss adjustment expenses (LAE) and (c) the impact of experience rating on pure premium.

The projected indemnity loss factor of 1.003 is computed as the ratio of the projected ratio of indemnity losses to pure premium at the industry average filed pure premium rate level as of July 1, 2020 of 0.278 (see Section B, Exhibit 8, line 1) to the product of (a) the implied expected provision for indemnity losses in the January 1, 2020 advisory pure premium rates of 0.3282¹ and (b) the ratio of the average January 1, 2020 advisory pure premium rate of \$1.52 per \$100 of payroll to the industry average filed pure premium rate as of July 1, 2020 of \$1.80 per \$100 of payroll. The projected medical loss factor of 1.017 is computed as the ratio of the projected ratio of medical losses to pure premium at the industry average filed pure premium rate level as of July 1, 2020 of 0.340 (see Section B, Exhibit 8, line 1) to the product of (a) the implied expected provision for medical losses in the January 1, 2020 advisory pure premium rates of 0.3958² and (b) the ratio of the average January 1, 2020 advisory pure premium rate of \$1.52 per \$100 of payroll to the industry average filed pure premium rate as of July 1, 2020 of \$1.80 of \$100 of payroll.

Shown below are the indemnity and medical composite factors, which are the projected indemnity and medical loss factors adjusted for the indicated provision for loss adjustment expenses of 34.0% (see Section B, Appendix C) and the selected experience rating off-balance correction factor of 1.019 (see Section C, Appendix B of the January 1, 2021 Regulatory Filing).

¹ This factor represents the loss provision in the January 1, 2020 advisory pure premium rates (i.e., 1/1.382 or 0.724) apportioned to indemnity based on the indemnity (0.4533) and medical (0.5467) split reflected in the overall selected loss to payroll ratios contained in Section C, Appendix C of the January 1, 2021 Regulatory Filing.

² This factor represents the loss provision in the January 1, 2020 advisory pure premium rates (i.e., 1/1.382 or 0.724) apportioned to medical based on the indemnity (0.4533) and medical (0.5467) split reflected in the overall selected loss to payroll ratios contained in Section C, Appendix C of the January 1, 2021 Regulatory Filing.

	<u>Indemnity</u>	<u>Medical</u>
(1) Projected Loss Factors (Prior to application of COVID-19 factor)		
(a) Projected Loss to Industry Average Filed Pure Premium Rate as of July 1, 2020	0.278	0.340
(b) Expected Loss Provision in January 1, 2020 Advisory Pure Premium Rates	0.3282	0.3958
(c) Ratio of Average January 1, 2020 Advisory Pure Premium Rate to Industry Average Filed Pure Premium Rate as of July 1, 2020	0.8444	0.8444
(d) Projected Loss Factors: [(a) / [(b) x (c)]]	1.003	1.017
(2) Loss Adjustment Expense Factor	1.340	1.340
(3) Experience Rating Off-Balance Factor	1.019	1.019
(4) Composite Factors: (1d) x (2) x (3)	1.370	1.389

In summary, the January 1, 2021 pure premium rate for each classification, prior to reflecting the impact for COVID-19 workers' compensation claims, is calculated by (a) multiplying the indemnity component shown on the "Selected (Unlimited) Loss to Payroll Ratio" or, if applicable, the "Selected Loss to Payroll Ratio (Restricted to 25% Change)" line on the classification relativity review sheet for the classification contained in Section C, Appendix C of the January 1, 2021 Regulatory Filing by the indemnity composite factor of 1.370 shown above, (b) multiplying the medical component shown on the "Selected (Unlimited) Loss to Payroll Ratio" or, if applicable, the "Selected Loss to Payroll Ratio (Restricted to 25% Change)" line on the classification relativity review sheets contained in Section C, Appendix C of the January 1, 2021 Regulatory Filing by the medical composite factor of 1.389 shown above and (c) adding the resulting products.

As discussed in Section B, Appendix D, the WCIRB projects the cost of COVID-19 workers' compensation claims on January 1, 2021 to August 31, 2021 policies to be 3.8% of losses and loss adjustment expenses. As discussed in Appendix A, the exposure to COVID-19 workers' compensation claims varies significantly by industry. In addition, given that the exposure to COVID-19 workers' compensation costs is not proportional to other exposures for the classification, the WCIRB is reflecting this provision as an additive rather than multiplicative factor to each classification. Appendix A summarizes the WCIRB's approach for computing the provision for COVID-19 workers' compensation claims by classification. To derive the proposed January 1, 2021 advisory pure premium rate for each classification, the pure premium rate based on the selected loss to payroll ratios adjusted by the composite factors as described above is added to the provision for COVID-19 workers' compensation claims for the classification shown in Appendix A, Exhibit 1.

For example, the proposed January 1, 2021 pure premium rate for Classification 4496, *Plastics – fabricated products mfg.*, of \$5.94 per \$100 of payroll is computed by multiplying the indemnity Selected (Unlimited) Loss to Payroll Ratio of 1.797 (see Section C, Appendix C of the January 1, 2021 Regulatory Filing) by the indemnity composite factor of 1.370, adding that result to the product of the medical Selected (Unlimited) Loss to Payroll Ratio of 2.463 (see Section C, Appendix C of the January 1, 2021 Regulatory Filing) and the medical composite factor of 1.389, and adding that result to the COVID-19 provision of \$0.06 for Classification 4496 (see Appendix A, Exhibit 1).

Proposed January 1, 2021 Pure Premium Rates
Effective January 1, 2021 on New and Renewal Policies
Effective on or after January 1, 2021

Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*
0005	5.15	2108	5.71	3039	5.53	3651	2.52	4420	8.54	5160	1.83	6003	13.82
0016	6.44	2109	4.46	3040	6.95	3681	0.75	4432	3.00	5183	5.49	6011	6.12
0034	6.24	2111	4.80	3060	5.95	3682	1.23	4470	1.97	5184	2.37	6204	6.82
0035	5.55	2113	7.34	3066	4.36	3683	1.61	4478	4.79	5185	4.83	6206	2.73
0036	7.53	2116	5.36	3070	0.36	3719	1.79	4492	5.51	5186	2.30	6213	1.75
0038	7.41	2117	6.63	3076	5.34	3724	3.94	4494	5.70	5187	2.53	6216	2.73
0040	3.73	2121	2.79	3081	7.84	3726	2.31	4495	3.25	5190	4.11	6218	5.81
0041	5.45	2123	6.00	3082	13.89	3805	0.99	4496	5.94	5191	2.36	6220	2.68
0042	5.14	2142	2.43	3085	8.25	3808	3.92	4497	3.83	5192	3.65	6233	2.08
0044	4.09	2163	6.40	3099	3.50	3815	5.25	4498	3.89	5193	1.23	6235	3.17
0045	4.14	2222	4.86	3110	5.77	3821	7.15	4499	5.81	5195	3.25	6237	1.70
0050	6.09	2362	14.57	3131	4.27	3828	3.36	4511	0.51	5201	6.91	6251	4.64
0079	3.33	2402	8.32	3146	2.76	3830	1.71	4512	0.27	5205	4.19	6258	5.49
0096	5.81	2413	5.03	3152	3.18	3831	2.93	4557	3.19	5212	5.73	6307	8.05
0106	10.91	2501	6.00	3165	3.78	3840	3.85	4558	3.01	5213	4.53	6308	3.11
0171	5.78	2570	9.81	3169	3.67	4000	2.50	4611	1.32	5214	4.63	6315	4.78
0172	4.18	2571	7.84	3175	3.14	4034	5.07	4623	6.35	5222	5.96	6316	3.98
0251	4.70	2576	5.33	3178	1.98	4036	4.41	4635	2.49	5225	5.15	6325	3.10
0400	3.00	2584	5.91	3179	3.23	4038	5.59	4665	6.58	5348	4.78	6361	3.98
0401	7.02	2585	6.77	3180	4.96	4041	3.32	4683	4.17	5403	10.93	6364	5.07
1122	2.63	2589	4.24	3220	2.36	4049	3.14	4691	1.63	5432	4.45	6400	5.35
1123	16.18	2660	8.04	3241	3.54	4111	2.53	4692	1.51	5436	3.95	6504	6.22
1124	4.54	2683	5.10	3257	4.89	4112	0.48	4717	3.87	5443	4.63	6834	5.10
1320	1.62	2688	5.62	3339	6.49	4114	2.65	4720	3.39	5446	5.31	7133	2.88
1322	3.89	2702	18.81	3365	4.26	4130	6.00	4740	1.06	5447	2.54	7198	7.72
1330	2.58	2710	5.70	3372	5.18	4150	2.69	4771	1.39	5467	7.84	7207	7.73
1438	4.55	2727	10.70	3383	3.39	4239	2.92	4828	2.29	5470	3.83	7219	7.08
1452	2.48	2731	4.83	3400	7.09	4240	8.58	4829	1.52	5473	10.12	7227	8.35
1463	2.93	2757	7.86	3401	4.29	4243	3.67	4831	4.25	5474	8.86	7232	8.99
1624	4.75	2759	7.63	3501	5.70	4244	4.44	4983	3.23	5479	5.71	7248	1.46
1699	1.89	2790	1.91	3507	4.15	4250	4.06	5020	3.76	5482	3.99	7272	6.36
1701	3.14	2797	7.97	3560	2.93	4251	3.79	5027	8.99	5484	8.81	7332	3.15
1710	3.93	2806	5.19	3568	2.60	4279	5.02	5028	4.60	5485	6.29	7360	5.62
1741	3.34	2812	5.06	3569	1.81	4283	2.89	5029	5.28	5506	4.07	7365	6.06
1803	7.67	2819	7.71	3570	3.72	4286	6.42	5040	9.24	5507	3.76	7382	6.66
1925	9.48	2840	3.90	3572	1.01	4295	6.20	5057	4.87	5538	5.23	7392	5.06
2002	7.78	2842	6.31	3573	1.27	4297	0.27	5059	9.53	5542	3.01	7403	5.47
2003	6.35	2852	5.81	3574	3.59	4299	4.08	5102	6.05	5552	23.15	7405	1.94
2014	4.61	2881	5.80	3577	1.35	4304	6.55	5107	4.52	5553	8.58	7409	7.80
2030	3.74	2883	13.27	3612	2.90	4312	4.31	5108	8.47	5606	0.84	7410	4.96
2063	4.23	2915	5.66	3620	6.07	4351	2.78	5128	1.34	5610	3.54	7421	1.60
2081	12.30	2923	3.69	3632	2.74	4354	2.30	5129	0.66	5632	10.93	7424	1.75
2095	5.69	3018	2.97	3634	2.79	4361	1.90	5130	1.05	5633	4.45	7428	3.45
2102	5.21	3022	5.16	3643	2.39	4362	1.81	5140	1.61	5650	5.73	7429	2.50
2107	4.19	3030	7.21	3647	5.00	4410	6.21	5146	4.81	5951	0.64	7500	3.19

*Pure Premium Rates are per \$100 of payroll unless otherwise noted. Note that payroll limitations apply to Classifications 7607, 7610, 8743, 8803, 8820, 8859, 9151, 9156, 9181 and 9610. Refer to the classification phraseology in Part 3, Section VII of the *California Workers' Compensation Uniform Statistical Reporting Plan – 1995* for more information.

Proposed January 1, 2021 Pure Premium Rates
Effective January 1, 2021 on New and Renewal Policies
Effective on or after January 1, 2021
(Continued)

Legend:

(A) See below

Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*
7515	1.14	8039	2.45	8292	8.08	8800	2.86	8868	0.80	9097	3.54	9610	1.40
7520	3.19	8041	6.76	8293	10.05	8801	0.63	8870	1.05	9101	4.73	9620	2.65
7538	2.68	8042	3.41	8304	7.42	8803	0.16	8871	0.24	9151	0.81		
7539	1.65	8046	3.58	8324	3.25	8804	3.06	8875	0.79	9154	2.33		
7580	2.97	8057	3.90	8350	4.76	8806	3.97	9007	3.20	9155	1.34		
7600	8.15	8059	3.07	8370	2.14	8807	0.34	9008	8.77	9156	4.15		
7601	3.66	8060	1.86	8387	3.39	8808	0.48	9009	2.94	9180	2.90		
7605	2.65	8061	3.13	8388	5.26	8810	0.24	9010	4.08	9181	10.30		
7607	0.32	8062	1.25	8389	3.35	8811	0.24	9011	3.67	9182	1.31		
7610	0.49	8063	3.26	8390	3.11	8812	0.24	9015	4.62	9184	9.43		
7706	4.83	8064	3.59	8391	2.95	8813	0.60	9016	3.22	9185	14.80		
7707	(A)	8065	2.28	8392	2.99	8818	0.73	9031	4.28	9220	5.63		
7720	2.39	8066	1.27	8393	2.58	8820	0.41	9033	3.90	9402	3.51		
7721	3.48	8071	1.26	8397	2.73	8821	0.98	9043	1.60	9403	6.09		
7722	(A)	8078	1.44	8400	2.24	8822	0.54	9048	3.30	9410	1.25		
7855	3.26	8102	1.42	8500	6.03	8823	3.72	9050	6.56	9420	7.14		
8001	4.59	8106	4.94	8601	0.34	8827	3.69	9053	1.61	9422	1.67		
8004	3.64	8107	2.31	8631	(A)	8829	3.60	9054	4.57	9424	5.41		
8006	3.79	8110	2.60	8720	1.46	8830	1.60	9059	2.53	9426	5.56		
8008	2.43	8116	2.84	8729	0.90	8831	1.62	9060	3.74	9501	4.19		
8010	3.20	8117	3.71	8740	0.94	8834	0.96	9061	3.17	9507	2.66		
8013	1.33	8209	5.77	8741	0.12	8838	1.17	9066	2.73	9516	2.11		
8015	3.81	8215	7.64	8742	0.36	8839	0.98	9067	1.77	9519	6.75		
8017	2.92	8227	4.20	8743	0.20	8840	0.40	9069	4.17	9521	5.01		
8018	5.46	8232	6.02	8744	0.40	8846	1.48	9070	5.29	9522	6.24		
8019	1.90	8267	7.11	8745	6.87	8847	8.11	9079	3.02	9529	4.70		
8021	6.25	8278	(A)	8746	0.36	8850	2.25	9085	3.31	9531	3.06		
8028	4.29	8286	5.49	8748	0.96	8851	3.41	9092	2.25	9549	10.18		
8031	5.36	8290	2.77	8749	0.23	8852	2.06	9095	4.00	9552	8.02		
8032	4.84	8291	4.48	8755	0.86	8859	0.06	9096	11.18	9586	1.56		

Per Capita
Classifications

Firefighters, Police, Police Deputies, etc.

Class Code	P.P. Rate*
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Firefighting Operations - volunteers

7707 231.92

Police, Sheriffs - volunteers

7722 110.33

Horse Racing
Classifications

Horse Racing

Class Code	P.P. Rate*
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Jockeys or Harness Racing Drivers (per race)

8278 147.35

Racing Stables (per occupied stall day)

8631 4.86

*Pure Premium Rates are per \$100 of payroll unless otherwise noted. Note that payroll limitations apply to Classifications 7607, 7610, 8743, 8803, 8820, 8859, 9151, 9156, 9181 and 9610. Refer to the classification phraseology in Part 3, Section VII of the *California Workers' Compensation Uniform Statistical Reporting Plan – 1995* for more information.

Section A**Appendix A****Computation of COVID-19 Factors Included in Proposed Pure Premium Rates**

This Appendix sets forth the calculation of the component of the WCIRB's proposed January 1, 2021 pure premium rates attributable to the cost of losses and loss adjustment expenses projected to be incurred on COVID-19 claims on policies incepting between January 1, 2021 and August 31, 2021.

Section B, Appendix D summarizes the WCIRB's projection of the overall cost of COVID-19 losses and loss adjustment expenses on policies incepting between January 1, 2021 and August 31, 2021 of 3.8%, or \$0.06 per \$100 of payroll. Exposure to COVID-19 workers' compensation claims in a particular California Standard Classification¹ (classification) is largely a function of an employers' employees being exposed to individuals who may carry the virus and is not proportional to other exposures for the classification. As a result, the WCIRB recommends that the provision to reflect the projected cost of COVID-19 claims on policies incepting between January 1, 2021 and August 31, 2021 be applied as an additive amount to the classification's pure premium rate rather than a multiplicative factor. In addition, as exposure to COVID-19 claims varies significantly by classification, rather than applying a uniform additive amount of \$0.06 per \$100 of payroll to each classification, the WCIRB recommends varying the amount by industry sector based on the relativity of the COVID-19 claims per \$100 of payroll reported in that industry sector. The computation is summarized below.

COVID-19 Claim Data

This computation is based on claim data provided by the Division of Workers' Compensation (DWC) containing the cumulative statewide number of First Report of Injuries (FROI) filed via the Workers' Compensation Information System (WCIS) as of May 14, 2020 and as of July 8, 2020. The provided data includes COVID-19 claim counts by classification. In instances where the classification was not provided for a reported claim, the industry sector based on the North American Industry Classification System (NAICS) for the claim was reported on the claim.

The number of COVID-19 claims filed after California shelter-in-place (SIP) restrictions began to be lifted was estimated by subtracting the claims filed by industry sector as of May 14, 2020 from those filed as of July 8, 2020. The WCIRB believes the distribution of claims by industry sector for this period in which SIP restrictions began to be lifted is more reflective of the future distribution of claims than that during the SIP period prior to May 14, 2020 for which much of the California economy was essentially closed down.

Statewide Payroll Computation

Industry level estimates of 2020 payroll for the COVID-19 loss to payroll relativities were derived by the WCIRB using employment forecasts from the June 2020 UCLA Anderson Forecast (UCLA). The employment forecasts were translated to payroll by multiplying by industry average wages from the Bureau of Labor Statistics Quarterly Census of Employment and Wages Data Series.² The resulting payroll amounts were converted to workers' compensation exposure by subtracting WCIRB estimates of the average amount of payroll excluded from workers' compensation exposure by industry sector.³

COVID-19 Claim to Payroll Relativities

The WCIRB's by-industry sector frequency of COVID-19 claims was calculated by dividing each industry sector's COVID-19 claim counts reported between May 14, 2020 and July 8, 2020 by that industry

¹ California standard classifications are approved by the Insurance Commissioner as reflected in Part 3 of the *California Workers' Compensation Uniform Statistical Reporting Plan—1995* (USRP).

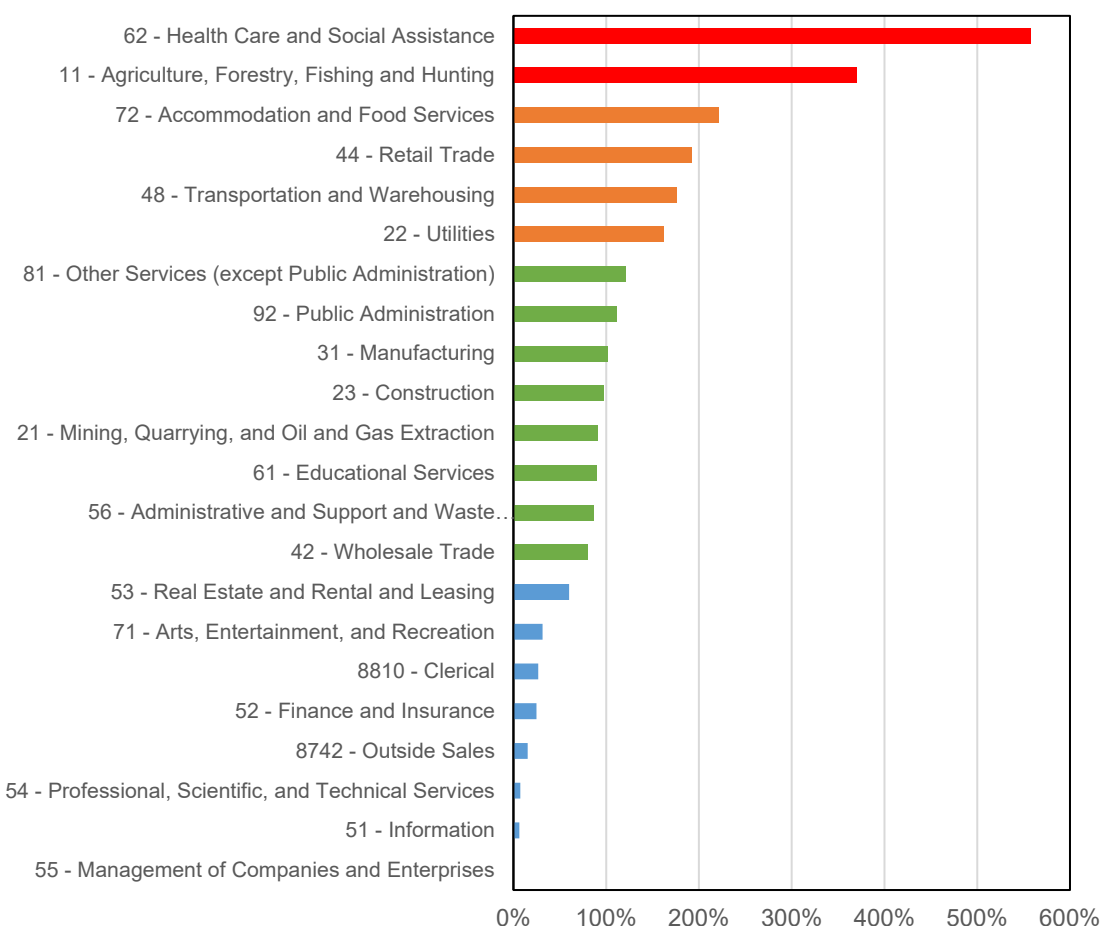
² Industry average wages from 2019 were used as 2020 forecasts are unavailable. Use of 2019 wages implicitly assumes that industry average wage relativities are the same in 2019 and 2020.

³ The share of payroll by industry sector, which is not included in workers' compensation exposure, was estimated based on payroll and workers' compensation exposure data collected as part of the WCIRB Premium Audit Accuracy Program.

sector's workers' compensation payroll adjusted to a 2020 level. Each industry sector's COVID-19 claim frequency was translated into a claim to payroll relativity by dividing by the statewide COVID-19 claim frequency.

Industry sectors were assigned to groupings of High, Medium-High, Medium-Low, and Low COVID-19 exposure based on their COVID-19 claim frequency relativities. These groupings are shown in Chart 1 with the group assignments color-coded.

**Chart 1: Ratio of COVID-19 Claim Count to Payroll
Relative to Statewide**



Classification COVID-19 Pure Premium Rate Components

A relativity was selected for each of the four industry sector groupings based on the combined relativities shown in Chart 1. Due to the heterogeneity of classification codes within industry sectors and the uncertainty around the estimates, the relativities for the High and Low group were tempered. Observed and selected relativities, along with the estimated share of projected policy year 2021 payroll are shown in Chart 2.

**Chart 2: Exposure Share and COVID-19
Claim Count to Payroll Ratio Relativities**

Industry Sector Grouping	Exposure Share	Observed Relativity	Selected Relativity
High	8.5%	525%	400%
Medium High	11.6%	201%	200%
Medium Low	20.2%	98%	100%
Low	59.7%	21%	33%

The January 1, 2021 pure premium rate component for COVID-19 losses for each classification within a particular industry⁴ was calculated by multiplying the appropriate selected relativity from Chart 2 by the statewide average rate for COVID-19 claims incurred on January 1, 2021 to August 31, 2021 policies of \$0.06 per \$100 of payroll. The resultant additive factors recommended to be applied to the classifications assigned to each of the four industry sector groupings are summarized in Chart 3.⁵

**Chart 3: Recommended Additive Factors by
Industry Sector Grouping**

Industry Sector Grouping	Recommended Addition to Proposed Pure Premium Rates
High	\$0.24
Medium High	\$0.12
Medium Low	\$0.06
Low	\$0.02

These proposed January 1, 2021 pure premium rate COVID-19 components by classification are shown in Exhibit 1 and are included in the proposed January 1, 2021 advisory pure premium rates shown in Section A.

⁴ The assignment of classifications to NAICS sector (industry) is shown in Exhibit 2.2 of Section C, Appendix C of the WCIRB's January 1, 2021 Regulatory Filing.

⁵ COVID-19 provisions for classifications that use an exposure basis other than payroll were computed by increasing their pure premium rate indication excluding COVID-19 claims by the ratio of their industry grouping's COVID-19 provision to the average pure premium rate indication excluding COVID-19 claims for their industry grouping.

Provision for COVID-19 Claim Costs in Proposed Pure Premium Rates

Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*
0005	0.24	2108	0.06	3039	0.06	3651	0.06	4420	0.06	5160	0.06	6003	0.06
0016	0.24	2109	0.06	3040	0.06	3681	0.06	4432	0.06	5183	0.06	6011	0.06
0034	0.24	2111	0.06	3060	0.06	3682	0.06	4470	0.06	5184	0.06	6204	0.06
0035	0.24	2113	0.06	3066	0.06	3683	0.06	4478	0.06	5185	0.06	6206	0.06
0036	0.24	2116	0.06	3070	0.06	3719	0.06	4492	0.06	5186	0.06	6213	0.06
0038	0.24	2117	0.06	3076	0.06	3724	0.06	4494	0.06	5187	0.06	6216	0.06
0040	0.24	2121	0.06	3081	0.06	3726	0.06	4495	0.06	5190	0.06	6218	0.06
0041	0.24	2123	0.06	3082	0.06	3805	0.06	4496	0.06	5191	0.06	6220	0.06
0042	0.06	2142	0.06	3085	0.06	3808	0.06	4497	0.06	5192	0.12	6233	0.06
0044	0.24	2163	0.06	3099	0.06	3815	0.06	4498	0.06	5193	0.06	6235	0.06
0045	0.24	2222	0.06	3110	0.06	3821	0.06	4499	0.06	5195	0.06	6237	0.06
0050	0.24	2362	0.06	3131	0.06	3828	0.06	4511	0.02	5201	0.06	6251	0.06
0079	0.24	2402	0.06	3146	0.06	3830	0.06	4512	0.02	5205	0.06	6258	0.06
0096	0.24	2413	0.06	3152	0.06	3831	0.06	4557	0.06	5212	0.06	6307	0.06
0106	0.06	2501	0.06	3165	0.06	3840	0.06	4558	0.06	5213	0.06	6308	0.06
0171	0.24	2570	0.06	3169	0.06	4000	0.06	4611	0.06	5214	0.06	6315	0.06
0172	0.24	2571	0.06	3175	0.06	4034	0.06	4623	0.06	5222	0.06	6316	0.06
0251	0.12	2576	0.06	3178	0.06	4036	0.06	4635	0.06	5225	0.06	6325	0.06
0400	0.06	2584	0.06	3179	0.06	4038	0.06	4665	0.06	5348	0.06	6361	0.06
0401	0.24	2585	0.06	3180	0.06	4041	0.06	4683	0.06	5403	0.06	6364	0.06
1122	0.06	2589	0.06	3220	0.06	4049	0.06	4691	0.06	5432	0.06	6400	0.06
1123	0.06	2660	0.06	3241	0.06	4111	0.06	4692	0.06	5436	0.06	6504	0.06
1124	0.06	2683	0.06	3257	0.06	4112	0.06	4717	0.06	5443	0.06	6834	0.06
1320	0.06	2688	0.06	3339	0.06	4114	0.06	4720	0.06	5446	0.06	7133	0.12
1322	0.06	2702	0.24	3365	0.06	4130	0.06	4740	0.06	5447	0.06	7198	0.12
1330	0.06	2710	0.06	3372	0.06	4150	0.06	4771	0.06	5467	0.06	7207	0.02
1438	0.06	2727	0.24	3383	0.06	4239	0.06	4828	0.06	5470	0.06	7219	0.12
1452	0.06	2731	0.06	3400	0.06	4240	0.06	4829	0.06	5473	0.06	7227	0.12
1463	0.06	2757	0.06	3401	0.06	4243	0.06	4831	0.06	5474	0.06	7232	0.12
1624	0.06	2759	0.06	3501	0.06	4244	0.06	4983	0.06	5479	0.06	7248	0.02
1699	0.06	2790	0.06	3507	0.06	4250	0.06	5020	0.06	5482	0.06	7272	0.06
1701	0.06	2797	0.06	3560	0.06	4251	0.06	5027	0.06	5484	0.06	7332	0.24
1710	0.06	2806	0.06	3568	0.06	4279	0.06	5028	0.06	5485	0.06	7360	0.12
1741	0.06	2812	0.06	3569	0.06	4283	0.06	5029	0.06	5506	0.06	7365	0.12
1803	0.06	2819	0.06	3570	0.06	4286	0.06	5040	0.06	5507	0.06	7382	0.12
1925	0.06	2840	0.06	3572	0.06	4295	0.06	5057	0.06	5538	0.06	7392	0.06
2002	0.06	2842	0.06	3573	0.06	4297	0.06	5059	0.06	5542	0.06	7403	0.12
2003	0.06	2852	0.06	3574	0.06	4299	0.06	5102	0.06	5552	0.06	7405	0.12
2014	0.06	2881	0.06	3577	0.06	4304	0.02	5107	0.06	5553	0.06	7409	0.24
2030	0.06	2883	0.06	3612	0.06	4312	0.12	5108	0.06	5606	0.06	7410	0.24
2063	0.06	2915	0.06	3620	0.06	4351	0.06	5128	0.06	5610	0.06	7421	0.12
2081	0.06	2923	0.06	3632	0.06	4354	0.06	5129	0.06	5632	0.06	7424	0.12
2095	0.06	3018	0.06	3634	0.06	4361	0.02	5130	0.06	5633	0.06	7428	0.12
2102	0.06	3022	0.06	3643	0.06	4362	0.02	5140	0.06	5650	0.06	7429	0.12
2107	0.06	3030	0.06	3647	0.06	4410	0.06	5146	0.06	5951	0.06	7500	0.12

*COVID-19 provisions in Pure Premium Rates are per \$100 of payroll unless otherwise noted. The statewide average provision for COVID-19 claim costs in January 1, 2021 Pure Premium rates is \$0.06 per \$100 of payroll.

Provision for COVID-19 Claim Costs in Proposed Pure Premium Rates

(Continued)

Legend:

(A) See below

Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*	Class Code	P.P. Rate*
7515	0.12	8039	0.12	8292	0.12	8800	0.02	8868	0.06	9097	0.06	9610	0.02
7520	0.12	8041	0.06	8293	0.12	8801	0.02	8870	0.06	9101	0.06	9620	0.06
7538	0.06	8042	0.06	8304	0.12	8803	0.02	8871	0.02	9151	0.02		
7539	0.12	8046	0.12	8324	0.12	8804	0.24	8875	0.06	9154	0.02		
7580	0.12	8057	0.12	8350	0.06	8806	0.24	9007	0.02	9155	0.02		
7600	0.02	8059	0.06	8370	0.06	8807	0.02	9008	0.06	9156	0.02		
7601	0.06	8060	0.12	8387	0.06	8808	0.02	9009	0.02	9180	0.02		
7605	0.06	8061	0.12	8388	0.12	8810	0.02	9010	0.02	9181	0.02		
7607	0.02	8062	0.12	8389	0.06	8811	0.02	9011	0.02	9182	0.02		
7610	0.02	8063	0.06	8390	0.06	8812	0.02	9015	0.02	9184	0.02		
7706	0.06	8064	0.06	8391	0.12	8813	0.06	9016	0.02	9185	0.02		
7707	(A)	8065	0.12	8392	0.06	8818	0.02	9031	0.06	9220	0.06		
7720	0.06	8066	0.12	8393	0.06	8820	0.02	9033	0.06	9402	0.06		
7721	0.06	8071	0.12	8397	0.06	8821	0.02	9043	0.24	9403	0.06		
7722	(A)	8078	0.12	8400	0.12	8822	0.02	9048	0.12	9410	0.06		
7855	0.06	8102	0.06	8500	0.06	8823	0.24	9050	0.12	9420	0.06		
8001	0.06	8106	0.06	8601	0.02	8827	0.24	9053	0.02	9422	0.06		
8004	0.06	8107	0.06	8631	(A)	8829	0.24	9054	0.06	9424	0.06		
8006	0.12	8110	0.06	8720	0.02	8830	0.24	9059	0.24	9426	0.06		
8008	0.12	8116	0.06	8729	0.06	8831	0.02	9060	0.02	9501	0.06		
8010	0.12	8117	0.06	8740	0.02	8834	0.24	9061	0.02	9507	0.02		
8013	0.12	8209	0.24	8741	0.02	8838	0.02	9066	0.06	9516	0.06		
8015	0.12	8215	0.06	8742	0.02	8839	0.24	9067	0.02	9519	0.06		
8017	0.12	8227	0.06	8743	0.02	8840	0.06	9069	0.02	9521	0.06		
8018	0.06	8232	0.06	8744	0.06	8846	0.06	9070	0.24	9522	0.06		
8019	0.06	8267	0.06	8745	0.06	8847	0.06	9079	0.12	9529	0.06		
8021	0.06	8278	(A)	8746	0.02	8850	0.02	9085	0.24	9531	0.06		
8028	0.02	8286	0.06	8748	0.12	8851	0.24	9092	0.02	9549	0.02		
8031	0.12	8290	0.02	8749	0.02	8852	0.24	9095	0.02	9552	0.06		
8032	0.06	8291	0.12	8755	0.06	8859	0.02	9096	0.06	9586	0.06		

Per Capita
Classifications

Firefighters, Police, Police Deputies, etc.

Class Code	P.P. Rate*
7707	3.93
7722	1.87

Horse Racing
Classifications

Horse Racing

Class Code	P.P. Rate*
8278	7.63
8631	0.25

*COVID-19 provisions in Pure Premium Rates are per \$100 of payroll unless otherwise noted. The statewide average provision for COVID-19 claim costs in January 1, 2021 Pure Premium rates is \$0.06 per \$100 of payroll.

Section B**Computation of Indicated Average Pure Premium Rate for January 1, 2021 to August 31, 2021 Policies**

The projected January 1, 2021 to August 31, 2021 policy period ratio of losses to premium at the industry average filed pure premium rate level as of July 1, 2020 based on experience through March 31, 2020 is 61.8%. The projected provision for loss adjustment expenses (LAE) is 34.0% of losses. In total, the projected loss and LAE as a percentage of premium at the industry average filed pure premium rate level as of July 1, 2020, prior to reflecting the cost impact of COVID-19 workers' compensation claims, is 82.8%. After reflecting a 0.5% indicated increase in the experience rating off-balance correction factor (see Section C, Appendix B of the WCIRB's January 1, 2021 Regulatory Filing) and a 3.8% increase to reflect the cost impact of COVID-19 workers' compensation claims on January 1 2021 to August 31, 2021 policies (see Appendix D), the result is an indicated -13.6% difference from the industry average filed pure premium rate as of July 1, 2020 of \$1.80 per \$100 of payroll. The resulting indicated average pure premium rate for January 1, 2021 to August 31, 2021 policies is \$1.56 per \$100 of payroll.

The data and actuarial methodologies underlying the computation of the indicated average pure premium rate for January 1, 2021 to August 31, 2021 policies is described below. This actuarial analysis is provided by Tony Milano, who is a Vice President and Actuary at the WCIRB and a Fellow of the Casualty Actuarial Society. The methodologies summarized in this Section have also been reviewed by the WCIRB's Actuarial Committee, whose members are also Fellows of the Casualty Actuarial Society.

Computation of Projected Loss to Pure Premium Ratio**A. Calendar Accident Year Experience**

The projected loss to pure premium ratio is based on an evaluation of calendar and accident year experience through 2019, valued as of March 31, 2020. A summary of the 1987 through 2019 calendar year premiums and accident year losses is shown in Exhibit 1. The experience contained in this summary reflects the data reported by insurers representing approximately 100% of the California workers' compensation insurance market in 2019. (The March 31, 2020 experience of a number of insurers that were in liquidation by the first quarter of 2020 but may have written a significant portion of the market in prior years has not been reported to the WCIRB and is, therefore, not included in this analysis.)

Exhibit 1 shows the earned premium, the indemnity paid losses and case reserves, and the medical paid losses and case reserves as of March 31, 2020 for accident years 1987 through 2019.¹ Exhibit 1 also shows, for informational purposes, the incurred but not reported (IBNR) losses reported by insurers as of March 31, 2020, the total incurred losses including IBNR losses, and the total loss ratio reported for each accident year.

B. Loss Development

The indemnity and medical losses paid and incurred (paid plus case reserves) shown in Exhibit 1 for each accident year are valued as of March 31, 2020. However, the amount of losses reported for the accidents that occur in a particular year will change over time, and the final cost of these accidents will not be known for many years. In general, the pure premium rates are intended to reflect the estimated final, or ultimate, cost of losses and loss adjustment expenses on all accidents that will occur during the period that the rates will be in effect. Consequently, the losses reported for each historical accident year as of March 31, 2020 are adjusted, or developed, to reflect the estimated ultimate cost of all accidents that have occurred during that year.

¹ As in prior pure premium rate filings, due to a change in the reporting of medical cost containment program (MCCP) costs beginning July 1, 2010, the paid medical losses shown in Exhibit 1 for accident year 2011 have been adjusted to exclude all MCCP paid costs including the portion of MCCP costs reported in medical losses. The paid medical losses shown in Exhibit 1 for accident years 2010 and prior continue to include all MCCP costs including the MCCP costs reported as allocated loss adjustment expenses.

The historical incurred age-to-age development factors for each annual evaluation period are shown in Exhibits 2.1.1 and 2.1.2 for indemnity and in Exhibits 2.2.1 and 2.2.2 for medical. The historical paid age-to-age development factors for each annual evaluation period are shown in Exhibits 2.3.1 and 2.3.2 for indemnity and Exhibits 2.4.1 and 2.4.2 for medical. These factors represent the historical year-to-year growth in the incurred and paid losses reported at consecutive March 31 evaluation periods.²

The methodologies used to develop each year's reported losses to its ultimate level in this pure premium rate filing are primarily based on paid loss development with adjustments for changes in claim settlement rates. Medical loss development is also adjusted for the impact of Senate Bill No. 1160 (SB 1160) and Assembly Bill No. 1244 (AB 1244) reforms related to liens and for the sharp decreases in pharmaceutical costs that have occurred since 2013. These methodologies, which are discussed in detail in Appendix A, are summarized below.

Indemnity Loss Development

The WCIRB is projecting future indemnity loss development primarily based on the latest historical paid indemnity age-to-age loss development factors. Exhibits 2.3.1 and 2.3.2 show the historical annual paid indemnity loss development factors.

Changes in the rate claims are settled can affect paid loss development patterns. As shown in Appendix A, Exhibit 4.1, since the implementation of Senate Bill No. 863 (SB 863) in 2013, indemnity claim settlement rates in California have sharply accelerated. If no adjustment to loss development is made, projections of future loss development for more current accident years may be distorted. A WCIRB retrospective study of the standard actuarial approach for adjusting paid loss development for changes in claim settlement rates has showed that the methodology improved the accuracy of the projection during periods of significant claim settlement rate change.³ As a result, the WCIRB is adjusting paid indemnity loss development through 75 months for the continued increase in indemnity claim settlement rates, which is consistent with the methodology used in the last several pure premium rate filings. Exhibits 2.5.3 through 2.5.8 show the adjustment for changes in claim settlement rates applied to paid indemnity loss development.

In prior pure premium rate filings, the WCIRB utilized incurred development corresponding to accident years 1997 and prior (i.e., 267 months and later). This methodology was based on a WCIRB study of paid and incurred loss development patterns which found that a significant shift in the ratio of incurred losses to paid losses in mid-1990s, particularly for the medical component, was distorting paid loss development patterns. However, a WCIRB retrospective study of late-term loss development conducted earlier this year showed that paid loss development after 267 months was significantly more accurate at projecting recent emerging loss development patterns for 267 months and later when compared to incurred loss development.⁴ In addition, the WCIRB's study showed that the loss development tail factor computed based on paid loss development was significantly more stable over the last several years compared to that based on incurred loss development.⁵ As a result of the WCIRB's recent loss development study, the WCIRB is applying paid indemnity loss development after 267 months.

The recent acceleration in claim settlement rates also likely impacts later period loss development as fewer claims being open in more mature periods would lead to fewer future payments being made. The WCIRB's recent study of longer-term loss development showed that there is a strong correlation between changes in the proportion of ultimate claims open at a point in time and changes in later period loss development.⁶ As a result, the WCIRB adjusted paid loss development applied after 267 months for the recent changes in claim settlement rates impacting later period development. Exhibits 2.5.9 through 2.5.12 show this adjustment applied to paid indemnity development. As shown in Exhibits 2.5.9 through

² Incurred and paid medical loss development factors for accident years 2012 and later shown in Exhibits 2.2 and 2.4 do not include MCCP costs while, for consistency of comparison, medical loss development factors for accident years 2011 and prior continue to include all MCCP costs since these costs cannot be completely segregated from other medical costs.

³ See Item AC17-03-03 of the March 21, 2017 WCIRB Actuarial Committee Agenda.

⁴ See Item AC19-08-05 of the March 16, 2020 WCIRB Actuarial Committee Agenda.

⁵ See Item AC19-08-05 of the August 1, 2019 WCIRB Actuarial Committee Agenda.

⁶ See Item AC19-08-05 of the August 4, 2020 WCIRB Actuarial Committee Agenda.

2.5.11, the estimated proportion of ultimate indemnity claims open is projected for each accident year and maturity using latest year claim development patterns and a three-year average of claim disposal patterns. The estimated proportion of claims open for accident years 2018 and 2019 after 267 months is then compared to that for the average for the latest three calendar years, as shown in Exhibit 2.5.11. The ratio of these proportions is then applied to the average age-to-age development for the latest three calendar years to project the development for the latest two accident years, as shown in Exhibit 2.5.12. The adjustment to loss development is tempered to be 40% of the actual change as the WCIRB's loss development study found that only approximately 40% of the change in the proportion of open claims was predictive of the change in paid development. (See Appendix A for a more thorough discussion of these adjustments.)

Exhibits 2.5.1 and 2.5.2 show the WCIRB's projected indemnity loss development factors including the adjustments discussed above. Indemnity development is based on the latest paid indemnity age-to-age development factor adjusted for changes in claim settlement rates through 75 months and the latest paid indemnity age-to-age development factor from 75 months through 111 months. Prior WCIRB studies have shown that loss development at later maturities can be more volatile than at earlier maturities and a longer-term average of age-to-age development factors reduces this volatility. As a result, the WCIRB has based the projected indemnity development from 111 months through 423 months on the average of the latest three paid indemnity age-to-age development factors, with the factors after 267 months adjusted for the impact of changes in claim settlement rates on later period development discussed above.

Losses continue to develop even after 423 months of maturity. To reflect this long-term development, an additional factor, or tail development factor, is applied to adjust the losses to an ultimate basis. This tail development factor applied to indemnity losses is based on an approach that fits an inverse power curve to a four-year average of the 111-to-123 through 339-to-351 paid indemnity age-to-age factors, adjusted for the long-term impact of changes in claim settlement rates as described above, and extrapolating the fitted factors to approximately 80 development years. The WCIRB's most recent study of long-term loss development showed that a tail factor based on the inverse power curve fit to a four-year average of paid loss development was the most stable of the alternative methods reviewed.⁷

Medical Loss Development

The WCIRB is projecting future medical loss development primarily based on the latest historical paid medical age-to-age loss development factors. Exhibits 2.4.1 and 2.4.2 show the historical annual paid medical loss development factors. In addition to the changes in settlement rates discussed above with respect to indemnity loss development, medical paid development can also be significantly impacted by reforms or shifting treatment patterns.

SB 1160 and AB 1244, which took effect in 2017, included a number of provisions related to liens which have reduced the number of lien filings by approximately 60% based on the WCIRB's retrospective review of the reforms.⁸ A 2018 WCIRB study showed that, prior to the reforms, liens represented a significant proportion of paid medical loss development, particularly at mid-maturities.⁹ The WCIRB believes relying on the historical paid medical development from these periods without adjusting for the reductions in future lien filings will overstate the loss development projection. To project loss development for accident years 2012 through 2019 on a post-lien reform basis, the WCIRB adjusted the cumulative loss development factors to reflect the estimated impact of the SB 1160 and AB 1244 lien-related provisions. These adjustments, which are reflected in a manner consistent with the approach used in the last several pure premium rate filings, were based on a review of medical development with and without any lien payments using the WCIRB's medical transaction data and assuming 60% weight given to the projected medical development with no lien payments (to represent the 60% estimated reduction in lien filings) and 40% weight given to the projected medical development with lien payments.

⁷ See Item AC19-08-05 of the August 1, 2019 WCIRB Actuarial Committee Agenda.

⁸ See Item AC18-03-03 of the March 18, 2019 WCIRB Actuarial Committee Agenda.

⁹ See Item AC18-03-03 of the March 19, 2018 WCIRB Actuarial Committee Agenda.

Some SB 1160 provisions also affected liens that had already been filed prior to the January 1, 2017 effective date of SB 1160. In July 2017, the Division of Workers' Compensation (DWC) dismissed approximately 292,000 liens which did not comply with the provisions of SB 1160. In 2018, the WCIRB analyzed the potential impact of the DWC lien dismissals on medical loss development patterns and found that the dismissed liens should have a significant impact on paid medical development emerging after July 2017.¹⁰ As a result, the WCIRB has adjusted medical payments made prior to July 1, 2017 to reflect the impact of the DWC lien dismissals in the age-to-age factor computation on accident years 2011 to 2016. This adjustment is made consistent with the approach reflected in the last several pure premium rate filings.

Since 2013, pharmaceutical costs have decreased sharply. In 2019 the WCIRB studied the impact of the recent pharmaceutical cost declines on paid medical loss development. The study showed that pharmaceutical costs represent a much larger proportion of later period development than compared to earlier periods.¹¹ Similar to other significant one-time shifts in the distribution of medical services, the WCIRB has adjusted medical payments in the age-to-age factor computation made prior to 2018 to be at the estimated 2018 pharmaceutical cost level. This adjustment to paid medical development is consistent with the approach reflected in the January 1, 2020 Pure Premium Rate Filing.

As discussed above, changes in claim settlement rates can distort paid loss development patterns if no adjustment is made. Given the continued acceleration in the rate claims are settling, the WCIRB recommends, as with indemnity development, adjusting paid medical loss development through 75 months for changes in claim settlement rates. Exhibits 2.6.3 through 2.6.8 show the adjustment for changes in claim settlement rates applied to the paid medical loss development factors through 75 months.

As discussed above, the recent acceleration in claim settlement rates also likely impacts later period loss development, particularly for medical losses. The WCIRB adjusted paid medical loss development applied after 267 months for recent changes in claim settlement rates impacting longer-term loss development using an approach similar to that applied for indemnity. Exhibits 2.5.9 through 2.5.12 show the computation of this adjustment applied to paid medical development.

The WCIRB's recommended age-to-age and cumulative medical loss development factors, which have been adjusted for the SB 1160 and AB 1244 lien reforms, the recent decreases in pharmaceutical costs, as well as for changes in indemnity claim settlement rates, are shown in Exhibits 2.6.1 and 2.6.2. As with indemnity, age-to-age paid medical development after 111 months and through 423 months was projected using an average of the latest three factors rather than the latest year's factor. Paid medical loss development beyond 423 months of maturity is estimated by applying an inverse power curve fit to the average of the latest four historical paid medical development factors with the adjustments for changes in pharmaceutical costs levels and the long-term impact of changes in claim settlement rates as described above.

Estimated Ultimate Loss Ratios

The historical accident year loss ratios are developed to their projected ultimate values in Exhibits 3.1 (for indemnity) and 3.2 (for medical). Column 1 of Exhibit 3.1 shows the historical reported (undeveloped) paid indemnity losses as a ratio to calendar year earned premium. Column 2 of Exhibit 3.1 shows the age-to-age paid indemnity development factor selected for each evaluation period from Exhibits 2.5.1 and 2.5.2. Column 3 of Exhibit 3.1 shows the cumulative paid indemnity development factor for each period. Column 4 of Exhibit 3.1 shows the projected ultimate indemnity loss ratio for each accident year based on the cumulative paid indemnity loss development projection factor shown in column 3 and the reported paid indemnity loss ratio shown in column 1.

¹⁰ See Item AC18-03-03 of the March 19, 2018 WCIRB Actuarial Committee Agenda.

¹¹ See Item AC19-06-03 of the June 14, 2019 WCIRB Actuarial Committee Agenda.

Column 1 of Exhibit 3.2 shows the historical reported (undeveloped) paid medical losses as a ratio to calendar year earned premium.¹² Column 2 of Exhibit 3.2 shows the historical paid medical loss ratios as of March 31, 2020 estimated at a 2018 pharmaceutical cost level by adjusting the medical payments made prior to 2018 for the estimated decrease in pharmaceutical costs through 2018. These loss ratios form the basis to which the age-to-age and cumulative paid medical loss development factors, which are also adjusted to a 2018 pharmaceutical cost level, are applied. Column 3 of Exhibit 3.2 shows the age-to-age paid medical development factor selected for each evaluation period, which include the adjustments for the impact of the DWC dismissed liens pursuant to SB 1160 and the recent decreases in pharmaceutical costs. Column 4 of Exhibit 3.2 shows the cumulative medical development factor for each period including the adjustment for the impact of SB 1160 and AB 1244 lien reforms on projected cumulative medical loss development. Column 5 of Exhibit 3.2 shows the developed medical loss ratio for each accident year adjusted to a 2018 pharmaceutical cost level based on the adjusted cumulative medical loss development factor shown in column 4 and the adjusted paid or incurred medical loss ratio shown in column 2. These loss ratios are used for the sole purpose of computing the indicated January 1, 2021 pure premium rate level and do not reflect the actual WCIRB estimates of projected ultimate loss ratios for those years. Column 6 of Exhibit 3.2 shows, for informational purposes, the projected ultimate medical loss ratios based on combining the unadjusted paid medical loss ratio from column 1 and the projected medical development derived from columns 2 and 5.

The COVID-19 pandemic and resulting shelter-in-place orders have significantly impacted the California workers' compensation system. Although the shelter-in-place orders began in the second half of March 2020, data reported through March 31, 2020 is largely prior to the impact of the pandemic as many services that would have occurred in late March are typically not paid until subsequent quarters. As a result, the WCIRB believes the projection of ultimate losses for historical accident years based on loss development through March 31, 2020 is not significantly distorted by the pandemic and is used as the basis for the projections in this filing. However, data reported for the remainder of 2020 will likely be significantly impacted by the pandemic.

C. Cost Level Adjustments to Losses

Each year's historical losses, once developed to an ultimate basis, are adjusted to reflect various measurable economic or claims-related changes that have occurred since the time that year's claims were incurred. In this way, each year's adjusted, or "on-level", ratios of losses to premium are on a more comparable basis and can be used to project future ratios of losses to premium. These adjustments are described in detail in Appendix B.

Exhibits 4.1 through 4.4 show the adjustments made to losses to reflect the changes in the cost of selected loss components that can be specifically measured. Exhibit 4.1 displays the average impact on indemnity benefits of legislative and regulatory changes as well as wage inflation. Specifically, column 1 of Exhibit 4.1 shows the impact of legislative, regulatory or judicial actions on indemnity claim severities, while column 2 of Exhibit 4.1 shows the estimated impact of these actions on indemnity claim frequencies.

Even without statutory benefit changes, wage inflation will impact the cost of indemnity benefits. Column 3 of Exhibit 4.1 shows the impact of wage inflation on indemnity benefits. These estimated wage inflation effects are based on (a) the most current historical and average of the UCLA Anderson School of Business and California Department of Finance forecast changes in California annual wages as shown in Exhibit 5.1, (b) the distribution of the weekly wages of injured workers, and (c) the schedule of statutory benefits in effect for each year. Column 4 of Exhibit 4.1 shows the total annual cost impact of statutory benefit changes and wage inflation on indemnity losses. Column 5 of Exhibit 4.1 shows the factor to adjust each historical accident year's estimated ultimate indemnity losses to the level expected for January 1, 2021 to August 31, 2021 policies.

¹² Medical loss ratios shown for accident years 2011 and subsequent do not include MCCP costs while those for accident years 2010 and prior include MCCP costs.

Exhibits 4.2 through 4.4 show the adjustment of medical losses to a current, or on-level basis. Exhibit 4.2 shows the impact of non-legislative factors on medical costs. For many years, several medical service components, such as physician services, inpatient and outpatient facility fees, pharmaceuticals, and medical-legal costs, have been subject to fee schedules. Column 3 of Exhibit 4.2 shows the average impact of regulatory changes in fee schedules on total medical costs by accident year based on the WCIRB's cost analysis of the fee schedule changes.

Some workers' compensation medical costs are not subject to fee schedules. As a result, the portion of each historical accident year's medical losses that is not subject to fee schedules is adjusted to reflect the anticipated general medical cost level during the period in which the proposed pure premium rates will be in effect. The cost adjustments used in this analysis are shown in column 4 of Exhibit 4.2. The historical values are based on the "Medical Care" component of the Consumer Price Index (CPI) as published by the U.S. Bureau of Labor Statistics and the California Department of Finance. Projected values are based on the average of California Department of Finance forecasts of medical inflation for the Los Angeles and San Francisco regions. Column 6 of Exhibit 4.2 shows the combined impact of fee schedule changes and general medical inflation on non-legislative medical cost components by accident year.

Legislative and regulatory changes and judicial actions also impact the cost of medical benefits. Exhibit 4.3 shows the impact of legislative, regulatory and judicial activity on medical costs. The factors in column 1 of Exhibit 4.3 reflect the impact on medical costs per claim of (a) statutory reforms and (b) legislative or regulatory changes or judicial action not otherwise reflected. (The factors shown in column 1 of Exhibit 4.3 do not include the impact of SB 1160 lien reforms and reductions in medical utilization resulting from SB 863 related to the recent decreases in pharmaceutical costs, which are reflected in the adjustments to paid medical loss development shown in Exhibits 2.6.1 and 2.6.2.) The factors in column 2 of Exhibit 4.3 reflect the impact on medical costs of the changes in the frequency of indemnity claims as a result of statutory benefit changes.

The combined impact of both measurable legislative and non-legislative changes on medical costs is shown in Exhibit 4.4. Column 4 of Exhibit 4.4 shows the medical on-level factor used to adjust each historical accident year's estimated ultimate medical losses to the level expected for January 1, 2021 to August 31, 2021 policies.

D. Wage and Premium Adjustments

As with accident year losses, each historical year's earned premium is adjusted to a common, or on-level, basis. The adjustments made to historical premium amounts are also discussed in detail in Appendix B.

Exhibit 5.1 displays the adjustment made to historical premiums to reflect changes in wage levels. Pure premium rates are expressed as a percentage of payroll. Consequently, the reported premium for each year reflects the wages paid during that year. To determine the level of pure premium needed to fund the cost of losses and loss adjustment expenses incurred on policies incepting from January 1, 2021 to August 31, 2021, the premium reported for each year is adjusted to reflect the wages anticipated to be paid during the period these policies will be in effect. The estimated changes in annual California wages shown in Exhibit 5.1 are based on average of those produced by the UCLA Anderson School of Business (as of March 2020) and California Department of Finance (as of April 2020) forecasts.

The COVID-19 pandemic has resulted in a sudden and significant slowdown in the California economy. Although the average wage change forecasts shown in Exhibit 5.1 reflect some impact of the recent slowdown, they may not fully reflect the impact on the average wage level of the typical California worker. During a recession, the mix of industries can shift significantly and the loss of lower wage, less experienced employees tends to drive measures of average wages artificially upward. In particular for the recent economic downturn, the reductions in employment levels have been greatest in the hospitality and entertainment industries which tend to have lower than average wages. A review of Bureau of Labor Statistics Occupation Employment Statistics data showed that during the Great Recession, median wages grew at a rate of approximately 0.8% less per year compared to growth in average wages. As a result, since growth in median wages is more consistent with the wage increase of the "typical" worker, the WCIRB judgmentally reduced the average wage level change for 2020 by 0.8% to reflect the shift in

the mix of employments resulting from the recent economic slowdown for the purposes of projecting the expected wage level underlying January 1, 2021 to August 31, 2021 policies.¹³ (This adjustment is also reflected in the adjustment to indemnity benefits for the impact of changes in average wages shown in Exhibit 4.1.)

The amount of premium generated during a particular year is based on the rates in effect during that year. The earned premium amounts shown in Exhibit 1 and reflected in the loss ratios shown in Exhibits 3.1 and 3.2 reflect the actual rates charged by insurers including the impact of most rating plan adjustments such as schedule rating.¹⁴ To determine the indicated difference from the industry average filed pure premium rate as of July 1, 2020, the earned premium generated for each year is adjusted to reflect the premium that would have been generated had the industry average filed pure premium rates as of July 1, 2020 been charged during that year. This adjustment is shown in columns 2a, 2b and 2c of Exhibit 5.2.

Column 2a of Exhibit 5.2 shows the ratio of the industry average charged rate to the average advisory pure premium rate for each calendar year subsequent to the implementation of competitive rating in 1995. Column 2b of Exhibit 5.2 shows the factors needed to adjust the earned premium for each calendar year to the industry average filed pure premium rate level as of July 1, 2020. The factors reflect both the historical changes in advisory pure premium rates that are needed to adjust each year's earned premium to the current (January 1, 2020) advisory pure premium rate level and an additional factor to adjust from the January 1, 2020 average advisory pure premium rate level to the industry average filed pure premium rate level as of July 1, 2020. Column 2c of Exhibit 5.2 shows the combined effect of the rate adjustments in columns 2a and 2b, which are the factors needed to adjust each year's earned premium to the premium that would have been earned had the industry average filed pure premium rates as of July 1, 2020 been charged during that year.

In addition to the adjustment to a common wage and pure premium rate level, the premium reported for each year is adjusted for (a) the surcharge premium generated under the Minimum Rate Law through 1995, (b) the average experience modification for each year, (c) the current experience rating off-balance correction factor and (d) the impact of the recession on audit premium for the 2007 through 2010 years for which there were very atypical levels of audit premiums collected. These adjustment factors are shown in Exhibit 5.2, columns 3, 4, 5, and 6, respectively. Column 7 of Exhibit 5.2 shows the combined on-level factor for each year that reflects the impact of all the premium adjustment factors applied by the WCIRB.

E. Trending of On-Level Ratios

The loss ratios shown for historical accident years, once adjusted to an ultimate and on-level basis, are trended forward to project the indicated loss ratio for January 1, 2021 to August 31, 2021 policies. The WCIRB is using a trending methodology based on applying separate projections of growth in claim frequency and claim severity to the average of the latest two years' on-level loss ratios, which is consistent with the methodology used in the last several pure premium rate filings. The WCIRB believes this approach of separately analyzing frequency and severity is particularly important in the current environment given the uncertainty in projecting costs during the COVID-19 pandemic for which the frequency and severity of claims are likely impacted by different forces. In addition, prior WCIRB retrospective reviews of trending methodologies have found that methods based on separate frequency and severity projections have continued to be generally more accurate than the alternative approaches reviewed, particularly during periods of transition.¹⁵

Exhibits 6.1 through 6.4 show the information upon which the separate frequency and severity projections are based. Exhibits 7.1 through 7.4 summarize the computation of the projected on-level loss to pure premium ratio for policies incepting between January 1, 2021 and August 31, 2021. Separate projections are made for the indemnity and medical components. These trending methodologies are also discussed in detail in Appendix B.

¹³ See Item AC20-08-04 of the August 4, 2020 WCIRB Actuarial Committee Agenda for more information.

¹⁴ These premiums do not reflect the impact of deductible credits, retrospective rating plan adjustments, or terrorism charges.

¹⁵ See Item AC12-12-02 of the August 2, 2017 and March 19, 2018 WCIRB Actuarial Committee Agendas.

Trended On-Level Indemnity Loss Ratio

Column 1 of Exhibit 7.1 displays the indemnity loss to pure premium ratios developed to an estimated ultimate level from Exhibit 3.1. These developed loss ratios are then adjusted for the impact of changes in statutory benefit levels and wage inflation on indemnity benefits from Exhibit 4.1 and the premium level adjustments from Exhibit 5.2 to produce the on-level indemnity ratios shown for 2019 and prior accident years in column 4 of Exhibit 7.1. These on-level loss ratios reflect the ratio of estimated ultimate indemnity losses to premium for each year as though the statutory benefit level and projected wages underlying January 1, 2021 to August 31, 2021 policies had been in effect for each historical year and the premium for each historical year had been generated at the industry average filed pure premium rate level as of July 1, 2020 and at the average wage level projected for the January 1, 2021 to August 31, 2021 policy period. These indemnity on-level loss ratios are also shown graphically in Exhibit 7.2.

The WCIRB's forecast changes in claim frequency are primarily based on its econometric indemnity claim frequency model. However, in a 2012 WCIRB analysis of trending methodologies, it was noted that frequency changes using a full year of preliminary actual frequency information were more predictive of the actual frequency change for that year than the change forecast based on the WCIRB's frequency model.¹⁶ As a result, the projected frequency change for accident year 2019 is based on the preliminary 2019 frequency change of 0.9%, estimated as a ratio of changes in reported indemnity claim counts from accident year 2018 to accident year 2019 as of March 31, 2020 relative to changes in statewide employment, which is consistent with the approach reflected in the last several pure premium rate filings.

Projected frequency changes for accident years 2020 through 2022 are based on the WCIRB's econometric indemnity claim frequency model. The model is based on a long-term forty-year history of frequency changes in relation to changes in indemnity benefit levels, economic factors, and other claims-related factors and excludes the impact of shifts in classification mix (i.e., "intra-class" frequency). Exhibit 6.1 shows the WCIRB's indemnity claim frequency model forecasts. The forecasts for 2020 through 2022 reflect economic data as of the June 2020 UCLA forecast. This includes the impact of the recent economic downturn which in accordance with the WCIRB's model results in a significant decrease forecast in accident year 2020 indemnity claim frequency. Earlier this year, the WCIRB reviewed indemnity claim frequency changes during prior recessions and found that the economic variable in the WCIRB's frequency model was generally predictive of frequency decreases during these periods.¹⁷

The WCIRB's indemnity claim frequency model has for many years included a variable for the proportion of indemnity claims that are for cumulative trauma (CT) injuries as growth in the proportion of CT claims has corresponded with growth in the frequency of non-CT claims over time. During the dot-com recession of the early 2000s as well as the Great Recession in 2009, the proportion of CT claims increased. In particular, following the Great Recession, the frequency of CT claims filed on a post-termination basis increased significantly. The WCIRB believes the recent sudden and sharp economic downturn will result in growth in the proportion of CT claims similar to that of prior recessions. Specifically, the WCIRB projected growth in the proportion of CT claims for accident year 2020 based on the average growth in the first year of the prior two recessions and changes in the proportion of CT claims for accident year 2021 based on the average change in the first recovery year from the prior two recessions.¹⁸ Combined with the projected changes in the economic factors and other factors of the WCIRB's frequency model, this results in intra-class frequency changes of -6.8%, 0.5%, and 0.0% projected for 2020, 2021, and 2022, respectively.

To project the indemnity severity trend, the WCIRB reviewed historical changes in on-level indemnity severities while also considering potential changes in average indemnity severities resulting from the COVID-19 environment. Exhibit 6.2 shows estimated ultimate and on-level indemnity severities by accident year. On-level indemnity severity growth since 1990 is approximately 1% per year, which includes prior periods of sharp growth as well as more recent periods of declining indemnity severities. In 2018 and 2019, indemnity claim severities increased at a rate just below 1% per year after declining at a

¹⁶ See Item AC12-12-02 of the March 20, 2013 WCIRB Actuarial Committee Agenda.

¹⁷ See *Impact of Economic Downturn on California Workers' Compensation Claim Frequency*, WCIRB, June 2020.

¹⁸ See Item AC20-08-04 of the August 4, 2020 WCIRB Actuarial Committee Agenda for more information.

steady rate over the prior eight years. The approximate average of the long-term rate of growth in on-level indemnity severities of 1% per year and the average decrease over the last five years of 1% per year is 0%.

The WCIRB believes several factors related to the COVID-19 pandemic and resulting economic downturn could result in increases in on-level indemnity severities in the near future. The pandemic and resultant stay at home orders have resulted in significant delays in medical treatment including that provided to injured workers, and a WCIRB preliminary analysis shows that delays in medical treatment on a claim can significantly impact both future indemnity and medical costs.¹⁹ Temporary disability duration may also increase during a recession as injured workers may have fewer employment opportunities to return to. Increases in the proportion of CT claims may also shift average indemnity costs upward as indemnity costs on CT claims tend to be higher on average compared to non-CT claims.²⁰ Finally, the economic-driven sharp decrease in indemnity claim frequency projected for 2020 may be disproportionate by size of claim as smaller claims may be relatively less likely to be filed, which could also shift average indemnity severities upward. In consideration of all these factors, the WCIRB has selected a 1% annual indemnity severity trend, which is somewhat higher than the average change over recent prior periods but comparable to the growth in on-level indemnity severities over the most recent two accident years. The WCIRB believes this selected indemnity severity trend is appropriate given the potential for increases in average indemnity costs due to the pandemic and the sharp downturn in the economy.

Column 4 of Exhibit 7.1 shows the projected indemnity loss ratio for January 1, 2021 to August 31, 2021 policies based on the average of the latest two accident year (2018 and 2019) on-level indemnity ratios adjusted by the WCIRB's selected frequency projections and a 1% annual on-level indemnity severity trend projection. The indemnity loss ratio projected on this basis is 0.278.

Trended On-Level Medical Loss Ratio

Exhibit 7.3 shows accident year on-level medical loss to industry average filed pure premium ratios, which have been computed in a manner similar to those for indemnity. These on-level ratios are also displayed graphically in Exhibit 7.4.²¹

As with indemnity, the WCIRB recommends projecting the on-level medical loss ratio for January 1, 2021 to August 31, 2021 policies based on the average of the latest two accident year (2018 and 2019) on-level medical ratios adjusted separately for frequency and severity trends. The projected on-level medical loss ratios shown in column 4 of Exhibit 7.3 reflect the same frequency change projections used in the indemnity loss projection.

Exhibit 6.3 shows estimated ultimate medical severities by accident year. As discussed above, medical losses shown for accident years 2011 and subsequent do not include MCCP costs while those for accident years 2010 and prior do include MCCP costs. In order to compare medical severity trends on a consistent basis, Exhibit 6.4 shows estimated ultimate medical severities with MCCP costs included in all years. Additionally, Exhibit 6.4 also shows for accident years 2005 and later estimated ultimate medical severities exclusive of MCCP costs for all years with estimated MCCP costs excluded from accident years 2010 and prior based on calendar year MCCP paid costs from WCIRB aggregate financial data calls.

As with indemnity, the WCIRB is basing projected average on-level medical severity growth on a review of historical medical severity trends as well as consideration of potential changes in average medical severities resulting from the pandemic and resulting economic downturn. For medical in particular, policy year 2021 losses will be paid over a very extended period (e.g., over one-half of policy year 2021 losses will be paid in 2024 or later and over one-quarter will be paid in 2030 or later) and medical cost levels are impacted by when services are provided rather than by when the injury occurred. As a result, it is

¹⁹ See Item AC20-08-05 of the August 10, 2020 WCIRB Actuarial Committee Agenda.

²⁰ See *The World of Cumulative Trauma Claims*, WCIRB, October 2018 for more information.

²¹ As discussed above, projections of on-level medical loss ratios for accident years 2011 and subsequent do not include MCCP costs while those for accident years 2010 and prior include MCCP costs. As a result, comparisons between the ratios shown in Exhibits 7.3 and 7.4 for 2010 and prior with those for 2011 and subsequent cannot be made on a consistent basis.

particularly important to consider long-term medical severity trends in addition to short-term trends in projecting future growth in medical severities.

Since 1990, annual on-level medical severity growth in California has averaged approximately 5.5%. This long-term average trend includes periods of reforms where medical severities have been flat to declining and “post-reform” periods of sharp medical severity growth. Over the last several years, on-level medical severity growth has been modest. In particular, average medical severity changes over the last five years has been essentially flat at -0.1% per year (as shown in Exhibit 6.4). Although average on-level medical severities grew by 4% in 2018, they decreased by -2% in 2019. A review of WCIRB unit statistical data and medical transaction data suggested that some of the factors driving the 2018 and 2019 changes include a greater than typical number of large claims incurred in 2018 and reductions in the utilization of physician services paid on 2019 claims through 12 months.

As discussed above, the COVID-19 pandemic has sent a significant shock through the California workers’ compensation system. As a result, the uncertainty in projecting medical severity trends is much greater than usual. The WCIRB believes there are several factors related to the pandemic that may push medical costs upward in the future. Delays or modifications in medical treatment due to shelter-in-place orders, increased social distancing, or a general slowdown in the claims process can increase medical costs. As discussed above, the WCIRB recently reviewed claims with delayed medical treatment and found them to incur significantly more medical treatment costs later than claims with earlier medical treatment. A review of WCIRB medical transaction data has also shown that, in the early months of the pandemic, pharmaceutical costs have begun to rise after declining sharply for the last several years.²² Finally, indemnity claim frequency is projected to decline sharply in 2020 as a result of the recent economic downturn and prior WCIRB studies have shown that these changes disproportionately impact smaller indemnity claims, which could push average medical severities upward.²³

Although the WCIRB is not projecting the 2020 accident year directly in this filing, the WCIRB believes some of these factors related to the pandemic will continue to impact average medical costs after 2020. Given these considerations, the WCIRB selected an average medical severity trend of 2.5%, which is somewhat higher than the average rate of growth over the last several years but corresponds with the approximate average of the long-term rate of growth of 5.5% per year and five-year rate of growth of -0.1% per year.

Column 4 of Exhibit 7.3 shows the projected medical loss ratio for January 1, 2021 to August 31, 2021 policies based on the average of the latest two accident year (2018 and 2019) on-level medical ratios adjusted by the WCIRB’s selected frequency projections and an annual medical severity trend projection of 2.5% per year. The medical loss ratio projected on this basis is 0.340.

Computation of Projected Loss Adjustment Expenses

The WCIRB’s projection of the cost of LAE on policies incepting between January 1, 2021 and August 31, 2021 is discussed in Appendix C. As indicated in Appendix C, the WCIRB estimates that the ratio of total LAE to losses is 34.0%.

Impact of COVID-19 Workers’ Compensation Claims

The WCIRB’s projection of the cost impact of COVID-19 workers’ compensation claims on January 1, 2021 to August 31, 2021 policies is discussed in Appendix D. As indicated in Appendix D, the WCIRB estimates that COVID-19 workers’ compensation claims will increase costs on January 1, 2021 to August 31, 2021 policies by 3.8%.

Computation of Experience Rating Off-Balance Factor

The WCIRB’s projection of the indicated experience rating off-balance factor for January 1, 2021 to August 31, 2021 policies is discussed in Section C, Appendix B of the WCIRB’s January 1, 2021 Regulatory Filing submitted on June 25, 2020. As indicated in that filing, the WCIRB projects a January 1,

²² See Item AC20-08-05 of the August 10, 2020 WCIRB Actuarial Committee Agenda.

²³ See *Analysis of Changes in Indemnity Claim Frequency—January 2016 Update Report*, WCIRB, January 2016.

2021 to August 31, 2021 experience rating off-balance factor of 1.019, which is 0.5% higher than the policy year 2020 experience rating off-balance factor.

Computation of the Indicated Average Pure Premium Rate

Line 1 of Exhibit 8 displays the projected ratios of on-level indemnity and medical losses to premium at the industry average filed pure premium rate level as of July 1, 2020 as computed in Exhibits 7.1 and 7.3. The projected ratio of total losses to premium, prior to the impact of COVID-19 workers' compensation claims, is 0.618. Line 2 of Exhibit 8 shows the estimated ratio of LAE to losses of 34.0% (see Appendix C). Line 3 of Exhibit 8 shows the projected loss and LAE ratio at the industry average filed pure premium rate level as of July 1, 2020, prior to the impact of COVID-19 workers' compensation claims, of 0.828. Line 4 of Exhibit 8 shows the estimated impact of COVID-19 workers' compensation claims on January 1, 2021 to August 31, 2021 policies of 3.8% of losses and LAE (see Appendix D). Line 5 of Exhibit 8 shows the projected ratio of loss and LAE for January 1, 2021 to August 31, 2021 policies including the impact of COVID-19 workers' compensation claims of 0.860.

Line 6 of Exhibit 8 shows the 0.5% indicated change in the experience rating off-balance correction factor for January 1, 2021 to August 31, 2021 policies (see Section C, Appendix B of the WCIRB's January 1, 2021 Regulatory Filing). Line 6 of Exhibit 8 shows the -13.6% difference in the indicated pure premium rate level from the industry average filed pure premium rate level as of July 1, 2020. Line 8 of Exhibit 8 shows the industry average filed pure premium rate as of July 1, 2020 of \$1.80 per \$100 of payroll, which is computed as described in Exhibit 1 of the Executive Summary. Line 9 of Exhibit 8 shows the indicated average January 1, 2021 pure premium rate of \$1.56 per \$100 of payroll. The indicated average pure premium rate of \$1.56 is 2.6% higher than the average of the approved January 1, 2020 advisory pure premium rates of \$1.52.

California Workers' Compensation
Accident Year Experience as of March 31, 2020

<u>Year</u>	<u>Earned Premium</u>	<u>Paid Indemnity</u>	<u>Indemnity Reserves</u>	<u>Paid Medical**</u>	<u>Medical Reserves</u>	<u>IBNR*</u>	<u>Total Incurred**</u>	<u>Loss Ratio*</u>
1987	4,373,509,816	1,506,581,121	6,983,407	1,335,377,316	44,279,337	50,419,639	2,943,640,820	0.673
1988	5,172,229,109	1,703,875,822	6,458,643	1,542,464,647	34,417,539	37,747,005	3,324,963,656	0.643
1989	5,675,115,503	1,940,152,253	6,816,066	1,798,960,215	51,453,347	40,047,984	3,837,429,865	0.676
1990	5,704,524,437	2,260,962,681	7,327,076	2,045,978,980	40,906,550	58,896,651	4,414,071,938	0.774
1991	5,866,491,692	2,478,655,908	15,729,942	2,202,401,910	48,094,600	55,794,315	4,800,676,675	0.818
1992	5,685,231,287	1,977,895,273	13,786,564	1,765,313,045	51,723,615	55,223,685	3,863,942,182	0.680
1993	5,934,618,230	1,694,444,969	12,984,535	1,516,338,467	62,883,556	45,253,182	3,331,904,709	0.561
1994	5,030,976,034	1,627,765,443	21,740,481	1,468,802,916	83,801,231	37,197,744	3,239,307,815	0.644
1995	3,789,174,380	1,766,957,340	26,055,810	1,626,396,784	92,481,760	47,132,765	3,559,024,459	0.939
1996	3,746,680,214	1,958,037,008	31,693,872	1,721,467,863	93,514,307	54,291,180	3,859,004,230	1.030
1997	3,926,898,608	2,320,858,576	37,004,610	2,019,379,717	121,974,525	93,454,281	4,592,671,709	1.170
1998	4,332,127,034	2,775,663,864	49,791,377	2,646,170,295	211,915,713	177,919,727	5,861,460,976	1.353
1999	4,550,437,880	3,058,361,600	52,765,081	3,042,238,915	169,133,198	242,865,344	6,565,364,138	1.443
2000	5,921,821,993	3,430,015,678	67,101,409	3,564,287,444	205,305,637	392,563,026	7,659,273,194	1.293
2001	10,118,688,616	4,845,593,327	99,518,290	5,374,235,665	346,062,260	591,752,362	11,257,161,904	1.113
2002	13,432,760,460	4,776,940,972	89,663,689	5,493,844,907	309,363,098	875,418,894	11,545,231,560	0.859
2003	19,472,988,351	4,553,717,488	146,596,578	5,069,501,808	343,967,143	1,228,419,721	11,342,202,738	0.582
2004	23,092,633,294	3,216,052,970	117,756,339	4,061,258,926	275,721,117	1,365,058,077	9,035,847,429	0.391
2005	21,394,600,575	2,533,693,094	102,222,811	3,656,663,395	263,688,739	1,096,615,955	7,652,883,994	0.358
2006	17,233,032,862	2,619,140,337	113,117,905	3,761,224,476	288,687,471	762,677,443	7,544,847,632	0.438
2007	13,276,770,615	2,763,508,131	131,925,738	4,037,349,709	328,613,704	699,243,500	7,960,640,782	0.600
2008	10,765,114,133	2,808,088,687	144,752,708	4,025,654,697	344,725,246	609,883,694	7,933,105,032	0.737
2009	8,901,420,752	2,681,931,234	143,113,817	3,831,372,382	347,688,212	477,594,946	7,481,700,591	0.841
2010	9,408,127,723	2,699,250,967	139,770,807	3,934,900,892	299,469,667	556,878,681	7,630,271,014	0.811
2011	10,141,174,044	2,665,257,538	150,568,884	3,553,502,085	338,343,769	749,445,690	7,457,117,966	0.735
2012	11,718,095,745	2,697,041,252	187,941,514	3,440,952,399	377,937,600	917,950,602	7,621,823,367	0.650
2013	14,186,071,217	2,720,799,353	205,970,987	3,268,505,783	395,440,928	1,527,473,427	8,118,190,478	0.572
2014	16,014,478,353	2,825,585,745	264,832,254	3,160,322,602	453,431,952	2,047,723,993	8,751,896,546	0.546
2015	17,059,790,388	2,787,269,724	353,242,253	3,000,974,440	595,588,668	3,004,840,479	9,741,915,564	0.571
2016	17,954,507,147	2,551,609,312	471,184,966	2,743,753,818	720,445,341	3,124,684,686	9,611,678,123	0.535
2017	17,671,411,530	2,180,411,558	687,355,209	2,401,171,139	1,002,033,179	3,385,228,596	9,656,199,681	0.546
2018	17,426,346,235	1,600,841,246	976,708,976	1,931,210,839	1,343,255,345	4,105,988,237	9,958,004,643	0.571
2019	16,100,338,377	722,775,823	1,021,097,928	1,045,964,570	1,579,983,484	5,025,220,327	9,395,042,132	0.584

* Shown for informational purposes only.

** Paid medical for accident years 2011 and subsequent exclude the paid cost of medical cost containment programs (MCCP).
Paid medical for accident years 2010 and prior include paid MCCP costs.

Source: WCIRB quarterly experience calls

Incurred Indemnity Loss Development Factors

Accident Year	Age-to-Age (in months)														
	27/15	39/27	51/39	63/51	75/63	87/75	99/87	111/99	123/111	135/123	147/135	159/147	171/159	183/171	195/183
1994											1.002	1.001	1.002	0.999	207/195
1995										1.002	1.003	1.002	1.003	1.001	1.001
1996									1.003	1.002	1.002	1.002	1.000	0.999	1.001
1997								1.004	1.006	1.005	1.003	1.002	1.003	1.002	1.001
1998							1.005	1.008	1.004	1.002	1.002	1.004	1.004	1.000	1.001
1999						1.012	1.011	1.003	1.007	1.004	1.002	1.004	1.003	1.002	1.000
2000					1.018	1.014	1.009	1.007	1.005	1.004	1.004	1.003	1.002	1.003	1.000
2001				1.027	1.021	1.018	1.014	1.007	1.008	1.007	1.005	1.005	1.003	1.001	1.001
2002			1.051	1.032	1.027	1.019	1.010	1.011	1.009	1.006	1.005	1.002	1.001	1.003	1.002
2003		1.125	1.068	1.047	1.030	1.018	1.020	1.016	1.012	1.008	1.008	1.002	1.003	1.003	1.005
2004	1.283	1.140	1.063	1.042	1.037	1.026	1.025	1.015	1.015	1.007	1.006	1.003	1.001	1.002	1.005
2005	1.400	1.168	1.085	1.063	1.049	1.039	1.022	1.016	1.010	1.005	1.006	1.004	1.003	1.002	1.005
2006	1.519	1.188	1.100	1.072	1.051	1.031	1.020	1.012	1.008	1.008	1.005	1.002	1.003	1.004	1.005
2007	1.562	1.216	1.104	1.066	1.045	1.030	1.022	1.012	1.009	1.003	1.009	1.008	1.005	1.002	1.005
2008	1.618	1.245	1.116	1.063	1.043	1.025	1.018	1.011	1.008	1.007	1.007	1.007	1.003	1.001	1.001
2009	1.670	1.233	1.124	1.067	1.043	1.021	1.016	1.013	1.010	1.009	1.009	1.009	1.009	1.003	1.002
2010	1.665	1.250	1.112	1.062	1.037	1.023	1.017	1.011	1.009	1.007	1.007	1.007	1.007	1.003	1.002
2011	1.657	1.225	1.109	1.053	1.032	1.024	1.016	1.010	1.009	1.008	1.008	1.008	1.008	1.003	1.002
2012	1.662	1.218	1.093	1.059	1.033	1.022	1.014	1.010	1.009	1.008	1.008	1.008	1.008	1.003	1.002
2013	1.604	1.201	1.093	1.047	1.030	1.022	1.014	1.010	1.009	1.008	1.008	1.008	1.008	1.003	1.002
2014	1.625	1.224	1.097	1.049	1.023	1.017									
2015	1.630	1.195	1.085	1.039											
2016	1.606	1.187	1.080												
2017	1.588	1.183													
2018	1.568														
Selected (a)	1.568	1.183	1.080	1.039	1.023	1.017	1.014	1.010	1.009	1.007	1.007	1.004	1.003	1.003	1.002
Cumulative	2.327	1.484	1.254	1.162	1.118	1.093	1.075	1.060	1.049	1.040	1.033	1.026	1.023	1.020	1.015

(a) Selections are latest year for the 15-to-27 month through 99-to-111 month factors and six-year average for the subsequent age-to-age factors.

Incurred Indemnity Loss Development Factors (Continued)

Accident Year	219/207	231/219	243/231	255/243	267/255	279/267	291/279	303/291	315/303	327/315	339/327	351/339	363/351	375/363	387/375	399/387	411/399	423/411	ULT/423Inc (b)
1983						1.002	1.000	1.001	1.000	1.000	1.001	1.001	1.001	1.001	1.000	1.001	1.001	1.000	
1984					1.000	1.001	1.000	1.000	1.001	1.001	1.000	1.001	1.001	0.999	1.000	1.000	1.001	1.000	
1985				1.000	1.001	1.000	1.000	1.000	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.001	1.000	
1986			1.001	0.999	1.000	1.000	1.001	1.000	1.002	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
1987		1.002	1.000	0.999	1.000	1.000	1.000	1.002	1.001	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.001		
1988	1.001	1.001	1.000	1.001	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.001	1.000			
1989	1.001	1.000	1.000	1.001	1.001	1.001	1.000	1.000	1.000	1.001	1.001	1.000	1.001	1.000	1.000				
1990	1.000	1.001	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
1991	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.001	1.001	1.000	1.000	1.000				
1992	1.000	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.000				
1993	1.000	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.001	1.001	1.000	1.000	1.000				
1994	1.001	1.002	1.001	1.001	1.001	1.001	1.000	1.001	1.000	1.000	1.001	1.001	1.000	1.000	1.001				
1995	1.002	0.999	0.999	1.001	1.000	1.001	1.000	1.001	1.002										
1996	1.002	1.001	1.000	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.001	1.001	1.000	1.000	1.000				
1997	1.000	1.000	1.000	0.999	1.001	1.001	1.000	1.000	1.002										
1998	1.000	1.002	1.002	1.001	1.000	1.001	1.000	1.000	1.000	1.000	1.001	1.001	1.000	1.000	1.000				
1999	1.000	1.000	1.002	1.002	1.001	1.001	1.001	1.001	1.002										
2000	1.002	1.001	1.002	1.002	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.001	1.000	1.000	1.000				
2001	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.001	1.000	1.000	1.000				
2002	1.003																		

Selected (a)
Cumulative1.001
1.0131.001
1.004

(b) The ULT/423Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 111-to-123 through 339-to-351 factors, excluding the 2016, 2017, and 2018 evaluations, and extrapolated to 80 development years.

Incurred Medical Loss Development Factors

Accident Year	27/15	39/27	51/39	63/51	75/63	87/75	99/87	Age-to-Age (in months) (b)					147/135	159/147	171/159	183/171	195/183	207/195
								111/99	123/111	135/123								
1994													1.017	1.013	1.006	1.008	1.021	1.011
1995										1.019			1.011	1.020	1.027	1.016	1.005	1.010
1996									1.013	1.021			1.017	1.020	1.015	1.013	1.012	1.008
1997								1.018	1.015	1.024			1.023	1.018	1.009	1.010	1.005	1.004
1998							1.022	1.022	1.035	1.021			1.020	1.010	1.010	1.013	1.007	1.012
1999						1.032	1.025	1.035	1.028	1.018			1.017	1.014	1.009	1.012	1.003	1.000
2000					1.030	1.031	1.041	1.022	1.019	1.022			1.016	1.017	1.012	1.005	0.998	0.995
2001				1.045	1.038	1.045	1.039	1.035	1.030	1.020			1.018	1.018	1.006	0.998	0.999	0.996
2002			1.050	1.039	1.056	1.038	1.034	1.028	1.027	1.020			1.013	1.007	0.998	0.999	1.001	1.007
2003		1.087	1.060	1.060	1.051	1.043	1.040	1.036	1.025	1.019			1.009	1.001	0.999	1.000	1.001	
2004	1.235	1.130	1.094	1.078	1.056	1.062	1.038	1.032	1.026	1.008			1.004	0.999	0.998	0.999	1.002	
2005	1.275	1.141	1.077	1.080	1.074	1.057	1.040	1.027	1.018	1.005			1.003	1.003	0.998	1.001		
2006	1.333	1.164	1.095	1.076	1.061	1.049	1.037	1.018	1.007	1.003			1.002	1.003	1.000			
2007	1.357	1.171	1.114	1.078	1.069	1.041	1.028	1.015	1.005	1.004			1.003	1.003				
2008	1.378	1.189	1.116	1.087	1.058	1.035	1.020	1.009	1.004	1.002			1.004					
2009	1.431	1.182	1.133	1.080	1.049	1.025	1.014	1.007	1.004	1.009								
2010	1.431	1.212	1.117	1.068	1.036	1.023	1.011	1.011										
2011	1.452	1.185	1.103	1.059	1.026	1.016	1.011	1.009										
2012	1.391	1.153	1.078	1.051	1.025	1.014	1.011											
2013	1.353	1.119	1.077	1.031	1.023	1.010												
2014	1.325	1.135	1.064	1.033	1.022													
2015	1.313	1.117	1.050	1.027														
2016	1.287	1.093	1.042															
2017	1.260	1.098																
2018	1.253																	
Selected (a)	1.253	1.098	1.042	1.027	1.022	1.010	1.015	1.009	1.007	1.005			1.004	1.003	1.000	1.000	1.002	
Cumulative	1.625	1.297	1.181	1.133	1.103	1.080	1.069	1.053	1.044	1.036			1.031	1.027	1.024	1.024	1.024	1.024

(a) Selections are latest year for the 15-to-27 month through 99-to-111 month factors and six-year average for the subsequent age-to-age factors.

(b) Incurred medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.

[illegible]

(c) The ULT/423Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 111-to-123 through 339-to-351 factors, excluding the 2016, 2017, and 2018 evaluations, and extrapolated to 80 development years.

Paid Indemnity Loss Development Factors

Accident Year	27/15	39/27	51/39	63/51	75/63	87/75	99/87	111/99	123/111	135/123	147/135	159/147	171/159	183/171	195/183	207/195
1994																
1995										1.013	1.009	1.008	1.006	1.005	1.003	1.003
1996									1.018	1.013	1.010	1.008	1.007	1.006	1.004	1.004
1997								1.025	1.017	1.015	1.011	1.009	1.007	1.004	1.005	1.004
1998							1.033	1.025	1.018	1.016	1.011	1.007	1.007	1.006	1.005	1.005
1999						1.049	1.033	1.021	1.018	1.014	1.009	1.009	1.008	1.007	1.006	1.006
2000					1.078	1.046	1.030	1.022	1.015	1.012	1.010	1.009	1.008	1.006	1.006	1.005
2001				1.119	1.070	1.045	1.030	1.022	1.016	1.014	1.011	1.011	1.008	1.007	1.006	1.004
2002			1.229	1.111	1.065	1.043	1.028	1.019	1.018	1.014	1.012	1.009	1.007	1.006	1.006	1.005
2003		1.533	1.206	1.109	1.064	1.039	1.029	1.025	1.022	1.020	1.015	1.010	1.009	1.008	1.007	1.005
2004	2.229	1.426	1.191	1.102	1.067	1.045	1.041	1.034	1.026	1.018	1.014	1.011	1.008	1.007	1.006	1.005
2005	2.138	1.410	1.200	1.104	1.073	1.057	1.048	1.037	1.025	1.019	1.014	1.011	1.008	1.008	1.007	1.007
2006	2.211	1.423	1.197	1.121	1.085	1.062	1.045	1.032	1.026	1.017	1.015	1.011	1.010	1.010		
2007	2.243	1.436	1.211	1.127	1.085	1.061	1.042	1.032	1.025	1.017	1.016	1.013				
2008	2.279	1.468	1.234	1.132	1.083	1.054	1.040	1.025	1.021	1.018	1.014					
2009	2.369	1.499	1.238	1.135	1.084	1.056	1.039	1.029	1.023	1.016						
2010	2.399	1.505	1.240	1.129	1.081	1.053	1.036	1.024	1.021							
2011	2.433	1.481	1.227	1.129	1.076	1.053	1.038	1.023								
2012	2.424	1.477	1.219	1.123	1.075	1.047	1.031									
2013	2.385	1.490	1.216	1.111	1.063	1.038										
2014	2.455	1.501	1.215	1.109	1.062											
2015	2.468	1.476	1.202	1.100												
2016	2.403	1.459	1.188													
2017	2.390	1.441														
2018	2.345															
Selected (a)	2.345	1.441	1.188	1.100	1.062	1.038	1.031	1.023	1.022	1.017	1.015	1.012	1.009	1.009	1.007	1.006
Cumulative	5.860	2.499	1.734	1.460	1.327	1.250	1.204	1.168	1.141	1.117	1.099	1.082	1.069	1.060	1.050	1.043

(a) Selections are latest year for the 15-to-27 month through 99-to-111 month factors and three-year average for the subsequent age-to-age factors.

Paid Indemnity Loss Development Factors (Continued)

Accident Year	219/207	231/219	243/231	255/243	267/255	279/267	291/279	303/291	315/303	327/315	339/327	351/339	363/351	375/363	387/375	399/387	411/399	423/411	ULT/423Pd (b)
1983						1.003	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	
1984					1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.001	1.000	1.001	
1985				1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.000	1.000	1.000	
1986		1.001		1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	1.000	
1987		1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.000	1.001	1.001	1.001	1.001	1.001	
1988	1.001	1.001	1.002	1.001	1.001	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
1989	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	1.001	1.000	1.001	
1990	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
1991	1.002	1.002	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
1992	1.001	1.002	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
1993	1.002	1.003	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
1994	1.004	1.002	1.003	1.003	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
1995	1.005	1.004	1.003	1.002	1.003	1.002	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
1996	1.005	1.004	1.003	1.003	1.002	1.003	1.003	1.002	1.002	1.002	1.002	1.002	1.002	1.002	1.003	1.003	1.003	1.007	
1997	1.004	1.003	1.002	1.002	1.003	1.003	1.003	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
1998	1.005	1.004	1.003	1.003	1.003	1.003	1.003	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
1999	1.004	1.003	1.003	1.003	1.003	1.003	1.003	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
2000	1.004	1.004	1.003	1.003	1.003	1.003	1.003	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
2001	1.005	1.004	1.003	1.003	1.003	1.003	1.003	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	
2002	1.005																		
Selected (a)	1.005	1.004	1.003	1.003	1.003	1.003	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.001	
Cumulative	1.037	1.032	1.029	1.026	1.023	1.020	1.017	1.015	1.014	1.013	1.012	1.011	1.010	1.009	1.008	1.007	1.007	1.007	1.006

(b) The ULT/423Pd tail factor was calculated based on an inverse power curve fit to a four-year average of the 111-to-123 through 339-to-351 factors and extrapolated to 80 development years.

Paid Medical Loss Development Factors

Unadjusted (a) Accident Year	27/15	39/27	51/39	63/51	75/63	87/75	99/87	111/99	123/111	135/123	147/135	159/147	171/159	183/171	195/183	207/195
1994											1.018	1.018	1.015	1.016	1.012	1.013
1995										1.024	1.020	1.023	1.019	1.018	1.017	1.013
1996									1.028	1.026	1.025	1.023	1.022	1.014	1.014	1.013
1997								1.034	1.032	1.028	1.025	1.020	1.019	1.014	1.014	1.015
1998							1.044	1.037	1.033	1.032	1.027	1.021	1.017	1.019	1.018	1.017
1999						1.053	1.042	1.031	1.035	1.030	1.025	1.020	1.016	1.018	1.018	1.014
2000					1.071	1.051	1.039	1.037	1.030	1.026	1.022	1.020	1.021	1.016	1.012	1.011
2001				1.094	1.071	1.054	1.046	1.037	1.033	1.026	1.022	1.026	1.019	1.017	1.012	1.010
2002			1.148	1.099	1.068	1.053	1.043	1.032	1.027	1.024	1.026	1.018	1.015	1.011	1.011	1.009
2003			1.154	1.100	1.070	1.055	1.045	1.033	1.029	1.033	1.025	1.018	1.015	1.012	1.011	1.011
2004	1.744	1.259	1.165	1.121	1.086	1.066	1.047	1.039	1.041	1.031	1.022	1.017	1.014	1.011	1.012	
2005	1.727	1.292	1.193	1.123	1.091	1.063	1.053	1.051	1.037	1.029	1.020	1.017	1.013	1.013		
2006	1.773	1.342	1.195	1.126	1.085	1.064	1.057	1.040	1.032	1.023	1.018	1.015	1.013			
2007	1.851	1.352	1.203	1.120	1.082	1.079	1.051	1.038	1.028	1.021	1.019	1.015				
2008	1.826	1.359	1.208	1.134	1.098	1.067	1.047	1.033	1.024	1.019	1.015					
2009	1.876	1.385	1.221	1.150	1.095	1.062	1.042	1.029	1.023	1.018						
2010	1.926	1.402	1.237	1.133	1.087	1.060	1.039	1.027	1.025							
2011	1.957	1.401	1.217	1.131	1.082	1.055	1.037	1.026								
2012	1.983	1.398	1.213	1.128	1.076	1.051	1.036									
2013	1.939	1.390	1.206	1.111	1.068	1.043										
2014	1.936	1.387	1.194	1.106	1.067											
2015	1.955	1.359	1.185	1.097												
2016	1.876	1.339	1.168													
2017	1.838	1.320														
2018	1.849															

Adjusted (b) Accident Year	27/15	39/27	51/39	63/51	75/63	87/75	99/87	111/99	123/111	135/123	147/135	159/147	171/159	183/171	195/183	207/195
2001															1.011	1.011
2002														1.013	1.012	1.013
2003													1.015	1.013	1.013	
2004												1.019	1.015	1.015		
2005												1.016	1.014			
2006												1.017				
2007																
2008																
2009																
2010						1.059	1.041	1.029	1.027							
2011					1.082	1.056	1.039									
2012				1.119	1.074	1.046										
2013				1.112	1.070											
2014			1.203	1.190												
2015		1.365	1.190	1.099												
2016	1.882	1.344	1.170													
2017	1.844	1.321														
2018	1.849															

Selected (c)

Cumulative Unadjusted
for Impact of SB 1160Cumulative Adjusted
for Impact of SB 1160(d)

- (a) Paid medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.
- (b) These factors are adjusted for the losses paid prior to July 1, 2017 by -3.8%, -3.8%, -3.4%, -2.4%, -0.9%, and -0.1% to accident years 2011 to 2016, respectively, for the SB 1160 lien reforms. Factors are also adjusted for the impact of pharmaceutical cost reductions to bring the historical payments to the current pharmaceutical cost level.
- (c) Selections are latest year for the 15-to-27 month through 99-to-111 month factors and three-year average for the subsequent age-to-age factors.
- (d) The cumulative factors for 39, 51, 63, and 75 months are adjusted by -3.7%, -2.5%, -1.5%, and -0.7%, respectively, for the impact of the SB 1160 reductions in future lien filings.

Paid Medical Loss Development Factors (Continued)

Unadjusted (a) Accident Year	Age-to-Age (in months)															
	219/207	231/219	243/231	255/243	267/255	279/267	291/279	303/291	315/303	327/315	339/327	351/339	363/351	375/363	387/375	399/387
1983						1.005	1.004	1.004	1.004	1.005	1.004	1.004	1.004	1.004	1.003	1.003
1984					1.004	1.004	1.003	1.003	1.003	1.004	1.004	1.003	1.003	1.002	1.003	1.003
1985				1.005	1.005	1.006	1.004	1.004	1.003	1.004	1.004	1.003	1.003	1.002	1.003	1.002
1986			1.006	1.004	1.004	1.004	1.005	1.005	1.005	1.005	1.005	1.006	1.004	1.006	1.004	1.003
1987		1.007	1.006	1.008	1.005	1.005	1.005	1.005	1.005	1.006	1.005	1.003	1.003	1.002	1.003	1.002
1988	1.006	1.005	1.008	1.005	1.005	1.006	1.006	1.004	1.005	1.004	1.003	1.003	1.003	1.004	1.002	
1989	1.005	1.006	1.006	1.005	1.005	1.008	1.006	1.006	1.005	1.005	1.003	1.003	1.003	1.003		
1990	1.005	1.005	1.005	1.005	1.006	1.004	1.004	1.004	1.003	1.002	1.002	1.003	1.003			
1991	1.006	1.006	1.006	1.005	1.006	1.006	1.005	1.005	1.003	1.002	1.004	1.004	1.003			
1992	1.007	1.007	1.000	1.007	1.007	1.005	1.005	1.005	1.005	1.006	1.003	1.003	1.003			
1993	1.011	1.011	1.009	1.013	1.010	1.008	1.005	1.006	1.008	1.004	1.004	1.003	1.003			
1994	1.009	1.009	1.012	1.010	1.008	1.008	1.007	1.004	1.005	1.008	1.004	1.003	1.003			
1995	1.012	1.016	1.013	1.011	1.013	1.007	1.007	1.007	1.005	1.006	1.003	1.003	1.003			
1996	1.014	1.014	1.010	1.007	1.007	1.009	1.007	1.007	1.007	1.007	1.007	1.007	1.007			
1997	1.013	1.010	1.006	1.006	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.007			
1998	1.013	1.010	1.007	1.008	1.008	1.008	1.007	1.007	1.008	1.008	1.008	1.008	1.008			
1999	1.012	1.009	1.009	1.008	1.008	1.008	1.007	1.007	1.008	1.008	1.008	1.008	1.008			
2000	1.008	1.008	1.006	1.006	1.006	1.006	1.006	1.006	1.006	1.006	1.006	1.006	1.006			
2001	1.010	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009			
2002	1.009															

Adjusted (b) Accident Year	Age-to-Age (in months)															
	219/207	231/219	243/231	255/243	267/255	279/267	291/279	303/291	315/303	327/315	339/327	351/339	363/351	375/363	387/375	399/387
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Selected (c)	1.010	1.009	1.008	1.009	1.008	1.009	1.008	1.007	1.006	1.005	1.003	1.003	1.003	1.003	1.004	1.003	1.002
Cumulative	1.183	1.172	1.161	1.152	1.142	1.132	1.122	1.114	1.106	1.099	1.094	1.091	1.087	1.083	1.080	1.076	1.070
																	1.068

(e) The ULT/423Pd tail factor was calculated based on an inverse power curve fit to a four-year average of the 111-to-123 through 339-to-351 adjusted factors and extrapolated to 80 development years.

Selected Indemnity Development Factors - Paid to Ultimate

Accident Year	27/15	39/27	51/39	63/51	75/63	87/75	99/87	111/99	123/111	135/123	147/135	159/147	171/159	183/171	195/183	207/195	219/207	231/219	243/231	255/243	267/255
1993												1.005	1.004	1.004	1.004	1.002	1.002	1.003	1.002	1.002	1.002
1994											1.009	1.008	1.006	1.005	1.003	1.003	1.004	1.002	1.003	1.002	1.002
1995										1.013	1.010	1.008	1.007	1.006	1.004	1.004	1.005	1.004	1.003	1.002	1.003
1996										1.013	1.011	1.009	1.007	1.004	1.005	1.004	1.005	1.004	1.003	1.003	1.002
1997								1.025	1.017	1.015	1.011	1.007	1.007	1.006	1.005	1.005	1.004	1.003	1.002	1.003	1.003
1998							1.033	1.025	1.018	1.016	1.009	1.009	1.008	1.007	1.006	1.006	1.005	1.004	1.003	1.003	1.003
1999						1.049	1.033	1.021	1.018	1.014	1.010	1.009	1.008	1.006	1.006	1.005	1.004	1.003	1.003	1.003	1.003
2000					1.078	1.046	1.030	1.022	1.015	1.012	1.010	1.009	1.007	1.007	1.004	1.004	1.004	1.004	1.003	1.003	1.003
2001			1.229	1.119	1.070	1.045	1.030	1.022	1.016	1.014	1.011	1.011	1.008	1.007	1.006	1.005	1.005	1.004	1.003	1.003	1.003
2002			1.206	1.111	1.065	1.043	1.028	1.019	1.018	1.014	1.012	1.009	1.007	1.006	1.005	1.005	1.005	1.004	1.003	1.003	1.003
2003		1.533	1.426	1.191	1.067	1.045	1.041	1.034	1.026	1.018	1.014	1.010	1.009	1.008	1.007	1.007	1.007	1.006	1.005	1.005	1.005
2004		2.229	1.426	1.191	1.067	1.045	1.041	1.034	1.026	1.018	1.014	1.010	1.009	1.008	1.007	1.007	1.007	1.006	1.005	1.005	1.005
2005		2.138	1.410	1.200	1.073	1.057	1.048	1.037	1.025	1.019	1.014	1.010	1.009	1.008	1.007	1.007	1.007	1.006	1.005	1.005	1.005
2006		2.211	1.423	1.197	1.085	1.062	1.045	1.032	1.026	1.017	1.015	1.011	1.009	1.008	1.007	1.007	1.007	1.006	1.005	1.005	1.005
2007		2.243	1.436	1.211	1.127	1.085	1.061	1.042	1.032	1.025	1.017	1.013	1.010	1.008	1.007	1.007	1.007	1.006	1.005	1.005	1.005
2008		2.279	1.468	1.234	1.132	1.083	1.054	1.040	1.025	1.021	1.018	1.016	1.010	1.008	1.007	1.007	1.007	1.006	1.005	1.005	1.005
2009		2.369	1.499	1.238	1.135	1.084	1.056	1.039	1.029	1.023	1.016										
2010		2.399	1.505	1.240	1.129	1.081	1.053	1.036	1.024	1.021											
2011		2.433	1.481	1.227	1.129	1.076	1.053	1.038	1.023												
2012		2.424	1.477	1.219	1.123	1.075	1.047	1.031													
2013		2.385	1.490	1.216	1.111	1.063	1.038														
2014		2.455	1.501	1.215	1.109	1.062															
2015		2.468	1.476	1.202	1.100																
2016		2.403	1.459	1.188																	
2017		2.390	1.441																		
2018		2.345																			
Selected (a)	2.345(b)	1.441(b)	1.174(b)	1.088(b)	1.051(b)	1.038	1.031	1.023	1.022	1.017	1.015	1.012	1.009	1.009	1.007	1.006	1.005	1.004	1.003	1.003	1.003
Cumulative	5.632	2.402	1.667	1.420	1.305	1.242	1.197	1.161	1.135	1.110	1.092	1.076	1.063	1.053	1.044	1.037	1.031	1.026	1.022	1.019	1.017

(a) Selections are latest year for the 15-to-27 month through 99-to-111 month factors and three-year average for the subsequent paid age-to-age factors.

(b) Based on calculations shown on Exhibits 2.5.3 to 2.5.8. Each of these selections is calculated as the latest year paid indemnity age-to-age factor multiplied by an adjustment for changes in claim settlement rates.

Selected Indemnity Development Factors - Paid to Ultimate (Continued)

Accident Year	Age-to-Age (in months)														ULT/423Pd (d)
	279/267	291/279	303/291	315/303	327/315	339/327	351/339	363/351	375/363	387/375	399/387	411/399	423/411		
1983	1.003	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	
1984	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.001	1.000	1.001	1.001	
1985	1.001	1.001	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	
1986	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.001	1.001	
1987	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.000	1.001	1.001	1.001	1.001	1.001	1.001	
1988	1.002	1.002	1.001	1.001	1.001	1.001	1.000	1.001	1.001	1.001	1.001	1.001	1.001	1.001	
1989	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	
1990	1.001	1.001	1.001	1.001	1.000	1.000	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	
1991	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	
1992	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	
1993	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	
1994	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	
1995	1.002	1.002	1.002	1.001	1.001	1.001	1.002	1.002	1.002	1.002	1.002	1.002	1.002	1.002	
1996	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	
1997	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	
1998	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	
Unadjusted (a)	1.003	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.001	1.006	
Selected (c)	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	1.000	1.000	1.001	1.004	
Cumulative	1.014	1.012	1.011	1.009	1.009	1.008	1.007	1.007	1.006	1.006	1.005	1.005	1.005	1.004	

(c) Adjusted for the impact of changes in claim settlement rates on later period development. See Exhibits 2.5.9 through 2.5.12.

(d) The ULT/423Pd tail factor was calculated based on an inverse power curve fit to a four-year average of the 111-to-123 through 339-to-351 factors and extrapolated to 80 development years.

**Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

A. Total Reported Indemnity Claim Counts

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						118,057
2012					124,734	125,038
2013				132,687	133,240	133,420
2014			137,696	138,801	139,291	139,484
2015		141,125	143,383	144,053	144,477	
2016	130,819	143,982	146,759	147,507		
2017	133,054	144,784	147,273			
2018	135,505	147,945				
2019	138,773					

B. Development of Total Reported Indemnity Claim Counts

Accident Year	Age-to-Age Development (in months):					
	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	<u>75-Ult</u>
2012					1.002	
2013				1.004	1.001	
2014			1.008	1.004	1.001	
2015		1.016	1.005	1.003		
2016	1.101	1.019	1.005			
2017	1.088	1.017				
2018	1.092					
Latest Year	1.092	1.017	1.005	1.003	1.001	
Cumulative	1.127	1.032	1.015	1.010	1.007	1.005

Acc. Year	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Ult. Claim Counts	156,389	152,707	149,444	148,922	145,435	140,215

C. Closed Indemnity Claim Counts

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						104,094
2012					105,308	111,792
2013				104,691	114,901	121,142
2014			95,260	111,745	121,808	127,800
2015		77,963	102,951	119,252	128,566	
2016	46,802	83,513	109,302	124,497		
2017	50,699	88,131	112,161			
2018	52,569	90,050				
2019	53,895					

Source: Accident year experience of insurers with available claim count data

**Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

D. Ultimate Indemnity Claim Settlement Ratio (a)

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						87.7%
2012					83.8%	89.0%
2013				78.1%	85.7%	90.3%
2014			67.9%	79.7%	86.9%	91.1%
2015		53.6%	70.8%	82.0%	88.4%	
2016	31.4%	56.1%	73.4%	83.6%		
2017	33.9%	59.0%	75.1%			
2018	34.4%	59.0%				
2019	34.5%					

E. Adjusted Closed Indemnity Claim Counts at Equal Percentiles of Ultimate Claim Counts (b)

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						108,127
2012					111,048	114,497
2013				112,122	118,562	122,244
2014			105,234	117,218	123,951	127,800
2015		85,762	109,152	121,582	128,566	
2016	51,322	87,818	111,770	124,497		
2017	51,501	88,126	112,161			
2018	52,626	90,050				
2019	53,895					

F. Average Paid Indemnity per Closed Claim

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						17,297
2012					15,579	17,331
2013				13,644	15,851	17,379
2014			11,149	14,513	16,766	18,242
2015		7,359	11,875	15,192	17,256	
2016	3,252	7,699	12,005	15,085		
2017	3,341	7,785	12,017			
2018	3,566	8,204				
2019	3,812					

- (a) Ratio of closed indemnity claim counts (Item C) to the estimated ultimate indemnity claim counts (Item B) for that accident year.
- (b) The claim counts for the latest evaluation of each accident year are equal to the reported number of closed indemnity claims. All prior evaluations shown are the product of the latest ultimate indemnity claim settlement ratio (Item D) and the ultimate indemnity claim counts (Item B) for that accident year.

Source: Accident year experience of insurers with available claim count data

**Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

G. Adjusted Average Paid Indemnity per Closed Claim (c)

Accident Year	Evaluated as of (in months)					
	15	27	39	51	63	75
2011						18,589
2012					17,120	18,119
2013				15,217	16,731	17,648
2014			13,078	15,698	17,280	18,242
2015		8,545	13,042	15,684	17,256	
2016	3,616	8,292	12,458	15,085		
2017	3,402	7,784	12,017			
2018	3,571	8,204				
2019	3,812					
2020						

H. Adjusted Paid Indemnity on Closed Claims (in \$000) (d)

Accident Year	Evaluated as of (in months)					
	15	27	39	51	63	75
2011						2,009,933
2012					1,901,170	2,074,519
2013				1,706,191	1,983,641	2,157,391
2014			1,376,227	1,840,067	2,141,836	2,331,271
2015		732,827	1,423,586	1,906,936	2,218,577	
2016	185,563	728,208	1,392,471	1,878,099		
2017	175,226	685,969	1,347,786			
2018	187,908	738,795				
2019	205,444					

I. Paid Indemnity on Open Claims (in \$000)

Accident Year	Evaluated as of (in months)					
	15	27	39	51	63	75
2011						522,066
2012					626,216	500,429
2013				745,920	593,097	461,197
2014			891,258	751,500	589,298	463,732
2015		848,825	876,539	710,785	555,919	
2016	458,630	824,626	829,832	665,539		
2017	461,628	822,467	825,361			
2018	493,585	857,088				
2019	515,277					

(c) Adjusted based on ultimate indemnity claim settlement ratios (Item D) and assuming a log-linear relationship between maturities.

(d) Each amount is the product of the adjusted closed indemnity claim counts (Item E) and the adjusted average paid indemnity per closed claim (Item G), and divided by \$1,000.

Source: Accident year experience of insurers with available claim count data

**Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

J. Average Paid Indemnity per Open Claim for Indemnity Claims in Transition (e)

Accident Year	Evaluated as of (in months)					
	15	27	39	51	63	75
2011						37,391
2012					32,236	37,779
2013				26,644	32,342	37,563
2014			21,003	27,775	33,707	39,689
2015		13,439	21,679	28,660	34,939	
2016	5,459	13,637	22,154	28,924		
2017	5,605	10,090	23,507			
2018	5,951	14,804				
2019	6,071					

K. Changes in Paid Indemnity on Open Claims Resulting from the Impact of Changes in
Claim Settlement Rates (in \$000) (f)

Accident Year	Evaluated as of (in months)					
	15	27	39	51	63	75
2011						-150,796
2012					-185,035	-102,155
2013				-197,965	-118,403	-41,394
2014			-209,480	-152,013	-72,234	
2015		-104,810	-134,454	-66,777		
2016	-24,668	-58,721	-54,677			
2017	-4,496	50				
2018	-339					

L. Adjusted Paid Indemnity on Open Claims (in \$000) (g)

Accident Year	Evaluated as of (in months)					
	15	27	39	51	63	75
2011						371,269
2012					441,181	398,274
2013				547,955	474,694	419,802
2014			681,777	599,487	517,064	463,732
2015		744,015	742,085	644,008	555,919	
2016	433,961	765,905	775,155	665,539		
2017	457,132	822,517	825,361			
2018	493,245	857,088				
2019	515,277					

- (e) Each amount is equal to the product of [the average monthly indemnity payment per open indemnity claim] and [the number of months for the current evaluation]. For evaluations indicating claim settlement rate decreases, the average monthly indemnity payment per open indemnity claim at the prior evaluation is used. For evaluations indicating claim settlement rate increases, the average monthly indemnity payment per open indemnity claim at the same evaluation is used.
- (f) Each amount is equal to [the difference between unadjusted and adjusted closed indemnity claim counts (Items C and E)] multiplied by the corresponding [average paid indemnity per open claim for indemnity claims in transition (Item J)].
- (g) Each amount is the sum of [paid indemnity on open claims (Item I)] and the corresponding [incremental changes in paid indemnity on open claims resulting from the impact of changes in claim settlement rates (Item K)].

Source: Accident year experience of insurers with available claim count data

**Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

M. Adjusted Total Paid Indemnity (in \$000) (h)

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						2,381,203
2012					2,342,351	2,472,793
2013				2,254,147	2,458,334	2,577,194
2014			2,058,005	2,439,554	2,658,899	2,795,003
2015		1,476,842	2,165,671	2,550,944	2,774,496	
2016	619,524	1,494,113	2,167,626	2,543,638		
2017	632,358	1,508,486	2,173,148			
2018	681,154	1,595,883				
2019	720,721					

N. Paid Indemnity Loss Development Factors Based on Adjusted Total Paid Indemnity

Accident Year	Evaluated as of (in months)				
	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>
2011					
2012					1.056
2013				1.091	1.048
2014			1.185	1.090	1.051
2015		1.466	1.178	1.088	
2016	2.412	1.451	1.173		
2017	2.385	1.441			
2018	2.343				
Latest Year	2.343	1.441	1.173	1.088	1.051
3-Year Average	2.380	1.453	1.179	1.089	1.052

O. Paid Indemnity Loss Development Factors (i)

Accident Year	Evaluated as of (in months)				
	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>
2012					1.075
2013				1.110	1.063
2014			1.215	1.109	1.062
2015		1.476	1.202	1.100	
2016	2.403	1.459	1.188		
2017	2.391	1.441			
2018	2.343				

(h) Each amount is the sum of the adjusted paid indemnity on closed claims (Item H) and the adjusted paid indemnity on open claims (Item L).

(i) Development factors are based on paid indemnity losses from the same insurer mix as that used in the adjustment for changes in claim settlement rates and applied in the calculation of the development factors in Item N.

Source: Accident year experience of insurers with available claim count data

**Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

P. Impact of Adjustment for Changes in Claim Settlement Rates (j)

Accident Year	Evaluated as of (in months)				
	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>
2012					-1.84%
2013				-1.79%	-1.38%
2014			-2.43%	-1.71%	-1.03%
2015		-0.62%	-1.98%	-1.12%	
2016	0.37%	-0.60%	-1.18%		
2017	-0.21%	0.00%			
2018	-0.02%				

Q. Paid Indemnity Loss Development Factors Adjusted for Changes in
Indemnity Claim Settlement Rates (k)

Accident Year	Evaluated as of (in months)				
	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>
2012					1.055
2013				1.091	1.048
2014			1.185	1.090	1.051
2015		1.467	1.178	1.088	
2016	2.412	1.450	1.174		
2017	2.385	1.441			
2018	2.345				
Latest Year	2.345	1.441	1.174	1.088	1.051
3-Year Average	2.380	1.453	1.179	1.090	1.052

- (j) Each factor represents the change in age-to-age development factors from Item O to those in Item N.
(k) Each factor is the product of [1.0 + the impact of adjustment for changes in claim settlement rates (Item P)] and [the paid indemnity age-to-age development factor from Exhibit 2.5.1].

Source: Accident year experience of insurers with available claim count data

Paid Loss Development Factors
Adjusted for the Impact of Claim Settlement Rate
Changes on Later Period Development

1. Reported Closed Indemnity Claim Counts

Accident	Evaluated as of (in months)									
Year	<u>267</u>	<u>279</u>	<u>291</u>	<u>303</u>	<u>315</u>	<u>327</u>	<u>339</u>	<u>351</u>	<u>363</u>	<u>375</u>
1989							211,438	211,538	211,598	211,661
1990						231,757	231,869	231,957	232,056	
1991					232,418	232,507	232,626	232,704		
1992				182,997	183,082	183,165	183,241			
1993			143,186	143,276	143,371	143,442				
1994		130,504	130,610	130,716	130,788					
1995	121,594	121,742	121,864	121,963						
1996	116,810	116,971	117,080							
1997	121,476	121,650								
1998	131,542									
1999										
Accident Year	<u>1998</u>	<u>1997</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>	<u>1991</u>	<u>1990</u>	<u>1989</u>

2. Ult. Claim Counts (a) 133,005 122,765 117,965 122,763 131,451 143,995 183,763 233,292 232,486 212,119

3. Ultimate Indemnity Claim Settlement Ratio (b)

Accident	Evaluated as of (in months)									
Year	<u>267</u>	<u>279</u>	<u>291</u>	<u>303</u>	<u>315</u>	<u>327</u>	<u>339</u>	<u>351</u>	<u>363</u>	<u>375</u>
1989							99.7%	99.7%	99.8%	99.8%
1990						99.7%	99.7%	99.8%	99.8%	
1991					99.6%	99.7%	99.7%	99.7%		
1992				99.6%	99.6%	99.7%	99.7%			
1993			99.4%	99.5%	99.6%	99.6%				
1994		99.3%	99.4%	99.4%	99.5%					
1995	99.0%	99.2%	99.3%	99.3%						
1996	99.0%	99.2%	99.2%							
1997	99.0%	99.1%								
1998	98.9%									

(a) Based on the latest year age-to-age development in indemnity claim counts. See Exhibit 2.5.3.

(b) Ratio of closed indemnity claim counts (Item 1) to the estimated ultimate indemnity claim counts (Item 2) for that accident year.

Source: Accident year experience of insurers with available claim count data

Paid Loss Development Factors
Adjusted for the Impact of Claim Settlement Rate
Changes on Later Period Development

4. Ratio of Incremental Closed Indemnity Claims to Estimated Prior Open Indemnity Claims (c)

Accident	Evaluated as of (in months)									
Year	<u>255-267</u>	<u>267-279</u>	<u>279-291</u>	<u>291-303</u>	<u>303-315</u>	<u>315-327</u>	<u>327-339</u>	<u>339-351</u>	<u>351-363</u>	<u>363-375</u>
1989								14.7%	10.3%	12.1%
1990							15.4%	14.3%	18.7%	
1991						10.2%	15.2%	11.7%		
1992					11.1%	12.2%	12.7%			
1993				11.1%	13.2%	11.4%				
1994			11.2%	12.6%	9.8%					
1995		12.7%	11.9%	11.0%						
1996	7.5%	14.0%	10.9%							
1997	12.5%	13.5%								
1998	11.8%									
1999										
3-Year Average	10.6%	13.4%	11.4%	11.6%	11.4%	11.2%	14.4%	13.6%	14.5%	12.1%
Share of Open on Prior (d)	89.4%	86.6%	88.6%	88.4%	88.6%	88.8%	85.6%	86.4%	85.5%	87.9%

5. Projected Open + IBNR Indemnity Claim Counts (e)

Accident	Evaluated as of (in months)									
Year	<u>267</u>	<u>279</u>	<u>291</u>	<u>303</u>	<u>315</u>	<u>327</u>	<u>339</u>	<u>351</u>	<u>363</u>	<u>375</u>
1989										458
1990									430	378
1991								588	503	442
1992							522	451	386	339
1993						553	474	409	350	308
1994					663	588	504	435	372	327
1995				800	709	630	539	466	398	350
1996			885	783	694	616	527	456	389	342
1997		1,115	988	874	775	687	588	509	435	382
1998	1,463	1,267	1,123	993	880	781	669	578	494	434
1999	1,417	1,228	1,088	962	853	757	648	560	479	421
...										
2018	414	358	318	281	249	221	189	163	140	123
2019	426	369	327	289	256	227	195	168	144	126

- (c) Equal to [the difference in ultimate indemnity claim settlement ratios from the prior evaluation (Item 3)] divided by [1.0 less the ultimate indemnity claim settlement ratio from the prior evaluation].
- (d) Equal to 1.0 minus the selected ratio of incremental closed indemnity claims to prior open indemnity claims from Item 4.
- (e) The italicized diagonal is equal to the Ultimate Indemnity Claim Counts (Item 2) less the Reported Closed Indemnity Claim Counts (Item 1) as of the latest evaluation. The remaining figures are projected based on the italicized diagonal and the Share of Open on Prior from Item 4.

Source: Accident year experience of insurers with available claim count data

Paid Loss Development Factors
Adjusted for the Impact of Claim Settlement Rate
Changes on Later Period Development

6. Ratio of Projected Open Claim Counts to Ultimate Claim Counts (f)

Accident	Evaluated as of (in months)									
Year	<u>267</u>	<u>279</u>	<u>291</u>	<u>303</u>	<u>315</u>	<u>327</u>	<u>339</u>	<u>351</u>	<u>363</u>	<u>375</u>
1989								0.3%	0.2%	0.2%
1990							0.3%	0.2%	0.2%	0.2%
1991						0.3%	0.3%	0.3%	0.2%	0.2%
1992					0.4%	0.3%	0.3%	0.2%	0.2%	0.2%
1993				0.5%	0.4%	0.4%	0.3%	0.3%	0.2%	0.2%
1994			0.6%	0.6%	0.5%	0.4%	0.4%	0.3%	0.3%	0.2%
1995		0.8%	0.7%	0.7%	0.6%	0.5%	0.4%	0.4%	0.3%	0.3%
1996	1.0%	0.8%	0.8%	0.7%	0.6%	0.5%	0.4%	0.4%	0.3%	0.3%
1997	1.0%	0.9%	0.8%	0.7%	0.6%	0.6%	0.5%	0.4%	0.4%	0.3%
1998	1.1%	1.0%	0.8%	0.7%	0.7%	0.6%	0.5%	0.4%	0.4%	0.3%
1999	1.1%	0.9%	0.8%	0.7%	0.6%	0.6%	0.5%	0.4%	0.4%	0.3%
...										
2018	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%
2019	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%
3-Year Historical Avg.	1.0%	0.9%	0.7%	0.6%	0.4%	0.3%	0.3%	0.3%	0.2%	0.2%

7. Ratio of Projected Percent Open to Historical Percent Open (g)

Accident	Evaluated as of (in months)									
Year	<u>267</u>	<u>279</u>	<u>291</u>	<u>303</u>	<u>315</u>	<u>327</u>	<u>339</u>	<u>351</u>	<u>363</u>	<u>375</u>
1989										
1990										0.75
1991									1.00	0.88
1992								0.98	0.98	0.86
1993							1.18	1.13	1.13	0.99
1994						1.28	1.38	1.32	1.31	1.15
1995					1.32	1.47	1.58	1.51	1.51	1.32
1996				1.16	1.35	1.50	1.60	1.54	1.53	1.34
1997			1.14	1.25	1.45	1.61	1.72	1.65	1.64	1.44
1998		1.11	1.19	1.31	1.52	1.68	1.81	1.73	1.73	1.51
1999	1.01	1.06	1.14	1.25	1.45	1.61	1.73	1.65	1.65	1.44
...										
2018	0.26	0.27	0.29	0.32	0.37	0.41	0.44	0.43	0.43	0.37
2019	0.26	0.27	0.30	0.32	0.38	0.42	0.45	0.43	0.43	0.37

(f) Equal to the Projected Open + IBNR Indemnity Claim Counts (Item 5) divided by the Ultimate Indemnity Claim Counts (Item 2).

The italicized diagonals are based on historical data while the remaining figures are projections.

(g) Equal to the Ratio of Projected Open Claim Counts to Ultimate Claim Counts (Item 6) divided by the three-year historical average.

Source: Accident year experience of insurers with available claim count data

Paid Loss Development Factors
Adjusted for the Impact of Claim Settlement Rate
Changes on Later Period Development

Age	Age-to-Age Paid Development (in months):									
	<u>267-279</u>	<u>279-291</u>	<u>291-303</u>	<u>303-315</u>	<u>315-327</u>	<u>327-339</u>	<u>339-351</u>	<u>351-363</u>	<u>363-375</u>	<u>375-387</u>

8. 3-Year Average (h)

Indemnity	1.003	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001
Medical	1.009	1.008	1.007	1.006	1.005	1.003	1.003	1.003	1.003	1.004

9. Adjustment Ratio (i)

Accident Year 2018	0.70	0.71	0.72	0.73	0.75	0.77	0.78	0.77	0.77	0.75
Accident Year 2019	0.70	0.71	0.72	0.73	0.75	0.77	0.78	0.77	0.77	0.75

10. Adjusted Factors (j)

Indemnity										
Accident Year 2018	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001
Accident Year 2019	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001
Medical										
Accident Year 2018	1.006	1.005	1.005	1.005	1.003	1.003	1.003	1.003	1.003	1.003
Accident Year 2019	1.006	1.005	1.005	1.005	1.004	1.003	1.003	1.003	1.003	1.003

(h) Indemnity development factors are from Exhibit 2.3.2. Medical development factors are from Exhibit 2.4.2 and include adjustments for SB 1160 and changes in pharmaceutical costs.

(i) Equal to the Ratio of Projected Percent Open to Historical Percent Open (Item 7) for the given accident year, with the difference from 1.0 adjusted by 40% to reflect the estimated impact of claim settlement rate changes on later period development.

(j) Equal to the [three year average factors (Item 8) - 1.0] multiplied by the Adjustment Ratio (Item 9), and adding 1.0.

Source: Accident year experience of insurers with available claim count data

Selected Medical Development Factors - Paid to Ultimate

Adjusted (a)(b) Accident Year	27/15	39/27	51/39	63/51	75/63	87/75	99/87	111/99	123/111	135/123	147/135	159/147	171/159	183/171	195/183	207/195	219/207	231/219	243/231	255/243	267/255
1996																				1.007	1.008
1997																				1.008	1.009
1998																				1.010	1.009
1999																				1.009	
2000																					
2001																					
2002																					
2003																					
2004																					
2005																					
2006																					
2007																					
2008																					
2009																					
2010																					
2011																					
2012																					
2013																					
2014																					
2015																					
2016																					
2017																					
2018																					
Selected (c)	1.849(d)	1.321(d)	1.161(d)	1.090(d)	1.059(d)	1.046	1.039	1.029	1.026	1.020	1.019	1.017	1.015	1.014	1.012	1.011	1.010	1.009	1.008	1.009	1.008
Cumulative Unadjusted for Impact of SB 1160	4.782	2.586	1.958	1.686	1.548	1.461	1.397	1.345	1.307	1.274	1.248	1.225	1.204	1.186	1.170	1.156	1.143	1.132	1.122	1.112	1.103
Cumulative Adjusted for Impact of SB 1160(e)	4.606	2.491	1.886	1.645	1.525	1.451	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(a) Paid medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.

(b) These factors are adjusted for the losses paid prior to July 1, 2017 by -3.6%, -3.8%, -3.4%, -2.4%, -0.9%, and -0.1% to accident years 2011 to 2016, respectively, for the SB 1160 lien reforms. Factors are also adjusted for the impact of pharmaceutical cost reductions to bring the historical payments to the current pharmaceutical cost level.

(c) Selections are latest year for the 15-to-27 month through 99-to-111 month factors and three-year average for the subsequent paid age-to-age factors.

(d) Based on calculations shown on Exhibits 2.6.3 to 2.6.8. Each of these selections are calculated as the latest year paid medical age-to-age factor multiplied by an adjustment for changes in claim settlement rates.

(e) The cumulative factors for 39, 51, 63, and 75 months are adjusted by -3.7%, -2.5%, -1.5%, and -0.7%, respectively, for the impact of the SB 1160 reductions in future lien filings.

Selected Medical Development Factors - Paid to Ultimate (Continued)

Accident Year	Age-to-Age (in months)																	ULT/423Pd (g)
	<u>279/267</u>	<u>291/279</u>	<u>303/291</u>	<u>315/303</u>	<u>327/315</u>	<u>339/327</u>	<u>351/339</u>	<u>363/351</u>	<u>375/363</u>	<u>387/375</u>	<u>399/387</u>	<u>411/399</u>	<u>423/411</u>					
1983													1.003					
1984												1.001	1.002					
1985												1.002	1.002					
1986												1.003	1.003					
1987												1.002	1.002					
1988												1.004	1.004					
1989												1.003	1.003					
1990												1.004	1.004					
1991												1.003	1.003					
1992												1.004	1.004					
1993												1.003	1.003					
1994												1.004	1.004					
1995												1.003	1.003					
1996												1.004	1.004					
1997												1.003	1.003					
1998												1.004	1.004					

Unadjusted (c)

Selected (f)

Cumulative

Unadjusted (c)	1.009	1.008	1.007	1.006	1.005	1.003	1.003	1.003	1.003	1.004	1.003	1.002	1.002	1.068
Selected (f)	1.006	1.005	1.005	1.005	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.002	1.002	1.047
Cumulative	1.094	1.087	1.081	1.076	1.071	1.067	1.064	1.062	1.059	1.056	1.053	1.050	1.049	1.047

(f) Adjusted for the impact of changes in claim settlement rates on later period development. See Exhibits 2.5.9 through 2.5.12.

(g) The UL T/423Pd tail factor was calculated based on an inverse power curve fit to a four-year average of the 111-to-123 through 339-to-351 factors and extrapolated to 80 development years.

**Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

A. Total Reported Indemnity Claim Counts

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						118,057
2012					124,734	125,038
2013				132,687	133,240	133,420
2014			137,696	138,801	139,291	139,484
2015		141,125	143,383	144,053	144,477	
2016	130,819	143,982	146,759	147,507		
2017	133,054	144,784	147,273			
2018	135,505	147,945				
2019	138,773					

B. Development of Total Reported Indemnity Claim Counts

Accident Year	Age-to-Age Development (in months):					
	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	<u>75-Ult</u>
2012					1.002	
2013				1.004	1.001	
2014			1.008	1.004	1.001	
2015		1.016	1.005	1.003		
2016	1.101	1.019	1.005			
2017	1.088	1.017				
2018	1.092					
Latest Year	1.092	1.017	1.005	1.003	1.001	
Cumulative	1.127	1.032	1.015	1.010	1.007	1.005

Acc. Year	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Ult. Claim Counts	156,389	152,707	149,444	148,922	145,435	140,215

C. Closed Indemnity Claim Counts

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						104,094
2012					105,308	111,792
2013				104,691	114,901	121,142
2014			95,260	111,745	121,808	127,800
2015		77,963	102,951	119,252	128,566	
2016	46,802	83,513	109,302	124,497		
2017	50,699	88,131	112,161			
2018	52,569	90,050				
2019	53,895					

Source: Accident year experience of insurers with available claim count and paid loss data

**Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

D. Ultimate Indemnity Claim Settlement Ratio (a)

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						87.7%
2012					83.8%	89.0%
2013				78.1%	85.7%	90.3%
2014			67.9%	79.7%	86.9%	91.1%
2015		53.6%	70.8%	82.0%	88.4%	
2016	31.4%	56.1%	73.4%	83.6%		
2017	33.9%	59.0%	75.1%			
2018	34.4%	59.0%				
2019	34.5%					

E. Adjusted Closed Indemnity Claim Counts at Equal Percentiles of Ultimate Claim Counts (b)

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						108,127
2012					111,048	114,497
2013				112,122	118,562	122,244
2014			105,234	117,218	123,951	127,800
2015		85,762	109,152	121,582	128,566	
2016	51,322	87,818	111,770	124,497		
2017	51,501	88,126	112,161			
2018	52,626	90,050				
2019	53,895					

F. Average Paid Medical per Closed Indemnity Claim

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						20,750
2012					17,545	19,756
2013				14,304	16,973	18,828
2014			10,971	14,384	16,831	18,480
2015		7,263	11,333	14,566	16,561	
2016	3,462	7,489	11,315	14,059		
2017	3,565	7,704	11,398			
2018	3,665	7,988				
2019	3,912					

- (a) Ratio of closed indemnity claim counts (Item C) to the estimated ultimate indemnity claim counts (Item B) for that accident year.
- (b) The claim counts for the latest evaluation of each accident year are equal to the reported number of closed indemnity claims. All prior evaluations shown are the product of the latest ultimate indemnity claim settlement ratio (Item D) and the ultimate indemnity claim counts (Item B) for that accident year.

Source: Accident year experience of insurers with available claim count and paid loss data

**Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

G. Adjusted Average Paid Medical per Closed Indemnity Claim (c)

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						22,672
2012					19,489	20,776
2013				16,201	18,038	19,156
2014			12,925	15,667	17,403	18,480
2015		8,345	12,469	15,041	16,561	
2016	3,807	8,023	11,721	14,059		
2017	3,625	7,704	11,398			
2018	3,670	7,988				
2019	3,912					

H. Adjusted Paid Medical (in \$000) on Closed Indemnity Claims (d)

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						2,451,448
2012					2,164,244	2,378,763
2013				1,816,444	2,138,615	2,341,655
2014			1,360,127	1,836,483	2,157,162	2,361,683
2015		715,723	1,360,973	1,828,752	2,129,175	
2016	195,386	704,563	1,310,103	1,750,271		
2017	186,674	678,903	1,278,441			
2018	193,121	719,277				
2019	210,837					

I. Paid Medical on Open Indemnity Claims (in \$000)

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						736,639
2012					800,570	651,489
2013				864,337	689,196	549,374
2014			933,300	793,689	624,796	505,334
2015		883,986	881,422	730,322	595,434	
2016	552,356	864,167	836,054	709,347		
2017	568,207	856,257	826,063			
2018	596,167	903,593				
2019	587,536					

(c) Adjusted based on ultimate indemnity claim settlement ratios (Item D) and assuming a log-linear relationship between maturities.

(d) Each amount is equal to the product of [adjusted closed indemnity claim counts (Item E)] and [adjusted average paid medical per closed indemnity claim (Item G)], and divided by \$1,000.

Source: Accident year experience of insurers with available claim count and paid loss data

**Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

J. Average Paid Medical per Open Indemnity Claim for Indemnity Claims in Transition (e)

Accident Year	Evaluated as of (in months)					
	15	27	39	51	63	75
2011						52,758
2012					41,211	49,183
2013				30,874	37,582	44,745
2014			21,993	29,334	35,737	43,250
2015		13,996	21,800	29,447	37,423	
2016	6,574	14,291	22,320	30,828		
2017	6,900	15,114	23,527			
2018	7,188	15,607				
2019	6,922					

K. Changes in Paid Medical on Open Indemnity Claims Resulting from the Impact of Changes in Indemnity Claim Settlement Rates (in \$000) (f)

Accident Year	Evaluated as of (in months)					
	15	27	39	51	63	75
2011						-212,775
2012					-236,554	-132,992
2013				-229,392	-137,588	-49,308
2014			-219,362	-160,547	-76,585	
2015		-109,151	-135,203	-68,612		
2016	-29,710	-61,536	-55,087			
2017	-5,533	62				
2018	-410					

L. Adjusted Paid Medical on Open Indemnity Claims (in \$000) (g)

Accident Year	Evaluated as of (in months)					
	15	27	39	51	63	75
2011						523,864
2012					564,017	518,497
2013				634,945	551,608	500,065
2014			713,938	633,143	548,211	505,334
2015		774,834	746,219	661,710	595,434	
2016	522,647	802,631	780,967	709,347		
2017	562,674	856,319	826,063			
2018	595,758	903,593				
2019	587,536					

- (e) Each amount is equal to the product of [the average monthly medical payment per open indemnity claim] and [the number of months for the current evaluation]. For evaluations indicating claim settlement rate decreases, the average monthly medical payment per open indemnity claim at the prior evaluation is used. For evaluations indicating claim settlement rate increases, the average monthly medical payment per open indemnity claim at the same evaluation is used.
- (f) Each amount is equal to [the difference between unadjusted and adjusted closed indemnity claim counts (Items C and E)] multiplied by [the corresponding average paid medical per open indemnity claim for indemnity claims in transition (Item J)].
- (g) Each amount is the sum of [paid medical on open indemnity claims (Item I)] and the corresponding [incremental changes in paid medical on open indemnity claims resulting from the impact of changes in indemnity claim settlement rates (Item K)].

Source: Accident year experience of insurers with available claim count and paid loss data

**Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

M. Paid Medical on Medical-Only Claims (in \$000)

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						216,191
2012					221,203	225,603
2013				221,653	228,317	230,781
2014			239,463	246,220	248,931	251,794
2015		241,457	250,793	256,181	261,405	
2016	217,062	258,096	268,099	275,130		
2017	236,913	276,919	287,435			
2018	250,889	300,289				
2019	244,471					

N. Adjusted Total Paid Medical (in \$000) (h)

Accident Year	Evaluated as of (in months)					
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>
2011						3,459,475
2012					2,949,464	3,122,863
2013				2,673,043	2,918,539	3,072,501
2014			2,313,529	2,715,846	2,954,303	3,118,811
2015		1,732,014	2,357,984	2,746,644	2,986,014	
2016	935,095	1,765,290	2,359,170	2,734,748		
2017	986,261	1,812,141	2,391,939			
2018	1,039,767	1,923,159				
2019	1,042,845					

O. Paid Medical Loss Development Factors Based on Adjusted Total Paid Medical

Accident Year	Evaluated as of (in months)				
	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>
2012					1.059
2013				1.092	1.053
2014			1.174	1.088	1.056
2015		1.361	1.165	1.087	
2016	1.888	1.336	1.159		
2017	1.837	1.320			
2018	1.850				
Latest Year	1.850	1.320	1.159	1.087	1.056

(h) Each amount is the sum of [adjusted paid medical on closed indemnity claims (Item H)], [adjusted paid medical on open indemnity claims (Item L)] and [paid medical on medical-only claims (Item M)]. The effect of the paid cost of medical cost containment programs are only present for accident years 2011 and prior.

Source: Accident year experience of insurers with available claim count and paid loss data

**Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates**

P. Paid Medical Loss Development Factors (i)

Accident Year	Evaluated as of (in months)				
	15-27	27-39	39-51	51-63	63-75
2012					1.075
2013				1.110	1.067
2014			1.194	1.105	1.067
2015		1.359	1.185	1.096	
2016	1.876	1.339	1.168		
2017	1.838	1.320			
2018	1.850				

Q. Impact of Adjustment for Changes in Indemnity Claim Settlement Rates (j)

Accident Year	Evaluated as of (in months)				
	15-27	27-39	39-51	51-63	63-75
2012					-1.54%
2013				-1.64%	-1.37%
2014			-1.65%	-1.51%	-1.03%
2015		0.18%	-1.68%	-0.84%	
2016	0.62%	-0.23%	-0.77%		
2017	-0.04%	0.00%			
2018	0.00%				

R. Paid Medical Loss Development Factors Adjusted for Changes in Indemnity
Claim Settlement Rates (k)

Accident Year	Evaluated as of (in months)				
	15-27	27-39	39-51	51-63	63-75
2012					1.065
2013				1.101	1.059
2014			1.183	1.095	1.059
2015		1.367	1.170	1.090	
2016	1.894	1.341	1.161		
2017	1.843	1.321			
2018	1.849				
Latest Year	1.849	1.321	1.161	1.090	1.059
3-Year Average	1.862	1.343	1.171	1.095	1.061

- (i) Development factors are based on paid medical losses from the same insurer mix as that used in the adjustment for changes in claim settlement rates and applied in the calculation of the development factors in Item O.
- (j) Each factor represents the change in age-to-age development factors from Item P to those in Item O.
- (k) Each factor is the product of [1.0 + the impact of adjustment for changes in claim settlement rates (Item Q)] and [the adjusted paid medical age-to-age development factor from Exhibit 2.6.1].

Source: Accident year experience of insurers with available claim count and paid loss data

**Developed Indemnity Loss Ratios Using Selected Loss Development Factors
Adjusted for Changes in Claim Settlement Rates
Based on Experience as of March 31, 2020**

Accident Year	(1) Paid Loss Ratio (a)	Development Factors		(4) Projected Ultimate Loss Ratio (4) = (1) x (3)
		(2) Annual (b)	(3) Cumulative	
1987	0.344	1.000	1.005	0.346
1988	0.329	1.000	1.005	0.331
1989	0.342	1.001	1.006	0.344
1990	0.396	1.000	1.006	0.399
1991	0.423	1.001	1.007	0.425
1992	0.348	1.001	1.007	0.350
1993	0.286	1.001	1.008	0.288
1994	0.324	1.001	1.009	0.326
1995	0.466	1.001	1.009	0.471
1996	0.523	1.001	1.011	0.528
1997	0.591	1.002	1.012	0.598
1998	0.641	1.002	1.014	0.650
1999	0.672	1.003	1.017	0.683
2000	0.579	1.003	1.019	0.590
2001	0.479	1.003	1.022	0.490
2002	0.356	1.004	1.026	0.365
2003	0.234	1.005	1.031	0.241
2004	0.139	1.006	1.037	0.144
2005	0.118	1.007	1.044	0.124
2006	0.152	1.009	1.053	0.160
2007	0.208	1.009	1.063	0.221
2008	0.261	1.012	1.076	0.281
2009	0.301	1.015	1.092	0.329
2010	0.287	1.017	1.110	0.319
2011	0.263	1.022	1.135	0.298
2012	0.230	1.023	1.161	0.267
2013	0.192	1.031	1.197	0.230
2014	0.176	1.038	1.242	0.219
2015	0.163	1.051	1.305	0.213
2016	0.142	1.088	1.420	0.202
2017	0.123	1.174	1.667	0.206
2018	0.092	1.441	2.402	0.221
2019	0.045	2.345	5.632	0.253

(a) Based on Exhibit 1.

(b) See Exhibits 2.5.1 and 2.5.2.

**Developed Medical Loss Ratios Using Selected Loss Development Factors
Adjusted for Changes in Claim Settlement Rates
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)
			Reform Adjusted			
			<u>Development Factors</u>			
Accident Year	<u>Paid Loss Ratio (a)</u>	<u>Adjusted Paid Loss Ratio (b)</u>	<u>Annual (c)</u>	<u>Cumulative (c)</u>	<u>Adjusted Developed Loss Ratio (d)</u> (2) x (4)	<u>Projected Ultimate Loss Ratio</u> (1) + ((5) - (2))
1987	0.305	0.270	1.002	1.050	0.284	0.319
1988	0.298	0.264	1.003	1.053	0.278	0.312
1989	0.317	0.281	1.003	1.056	0.297	0.333
1990	0.359	0.318	1.003	1.059	0.337	0.377
1991	0.375	0.333	1.003	1.062	0.353	0.396
1992	0.311	0.275	1.003	1.064	0.293	0.328
1993	0.256	0.227	1.003	1.067	0.242	0.271
1994	0.292	0.259	1.003	1.071	0.278	0.310
1995	0.429	0.381	1.005	1.076	0.410	0.458
1996	0.459	0.408	1.005	1.081	0.441	0.493
1997	0.514	0.457	1.005	1.087	0.497	0.554
1998	0.611	0.544	1.006	1.094	0.595	0.662
1999	0.669	0.596	1.008	1.103	0.657	0.730
2000	0.602	0.537	1.009	1.112	0.597	0.662
2001	0.531	0.476	1.008	1.122	0.534	0.589
2002	0.409	0.368	1.009	1.132	0.416	0.458
2003	0.260	0.235	1.010	1.143	0.268	0.294
2004	0.176	0.159	1.011	1.156	0.184	0.201
2005	0.171	0.155	1.012	1.170	0.181	0.197
2006	0.218	0.198	1.014	1.186	0.235	0.255
2007	0.304	0.277	1.015	1.204	0.334	0.361
2008	0.374	0.343	1.017	1.225	0.419	0.451
2009	0.430	0.397	1.019	1.248	0.496	0.529
2010	0.418	0.388	1.020	1.274	0.494	0.524
2011	0.350	0.328	1.026	1.307	0.429	0.451
2012	0.294	0.278	1.029	1.345	0.373	0.389
2013	0.230	0.220	1.039	1.397	0.307	0.318
2014	0.197	0.192	1.046	1.451	0.278	0.284
2015	0.176	0.173	1.059	1.525	0.264	0.267
2016	0.153	0.152	1.090	1.645	0.249	0.251
2017	0.136	0.135	1.161	1.886	0.255	0.256
2018	0.111	0.111	1.321	2.491	0.276	0.276
2019	0.065	0.065	1.849	4.606	0.299	0.299

(a) Based on Exhibit 1. Paid MCCP costs are excluded from accident years 2011 and subsequent.

(b) Based on experience evaluated as of March 31, 2020. Reflects an adjustment for the pharmaceutical cost reductions to restate the historical medical paid-to-date ratios at a 2018 pharmaceutical cost level.

(c) See Exhibits 2.6.1 and 2.6.2.

(d) The developed medical loss ratios shown were derived based on an adjustment for pharmaceutical cost reductions. They are only for purposes of projecting future medical loss ratios and do not reflect true estimates of ultimate loss ratios for those accident years.

Indemnity Benefit Level Factors

Accident Year	(1) Annual Benefit Change Prior to Frequency Adjustments (a)	(2) Frequency Adjustments (a)	(3) Annual Impact on Indemnity Benefits Due to Wage Inflation (b)	(4) Annual Cost Impact on Indemnity (c)	(5) Composite Indemnity Adjustment Factor (d)	
1987	0.0	0.0	1.9	1.9	1.536	
1988	0.0	0.0	1.5	1.5	1.514	
1989	0.0	0.0	1.5	1.5	1.491	
1990	2.3	19.9	1.7	24.7	1.196	
1991	4.9	14.8	0.8	21.4	0.985	
1992	1.8	-8.3	1.6	-5.2	1.038	
1993	0.2	-18.1	0.4	-17.6	1.260	
1994	-5.1	0.2	0.6	-4.3	1.318	
1995	6.3	0.6	1.0	8.0	1.220	
1996	5.3	0.4	1.2	7.0	1.140	
1997	9.7	0.2	1.6	11.7	1.021	
1998	6.5	0.0	1.8	8.4	0.942	
1999	5.7	0.0	2.1	7.9	0.873	
2000	3.9	0.0	3.1	7.1	0.815	
2001	-0.3	0.0	0.2	-0.1	0.815	
2002	-0.7	0.0	0.4	-0.3	0.835	(e)
2003	7.3	0.0	1.2	8.6	0.833	(e)
2004	-6.0	-13.7	2.1	-17.2	1.140	(e)
2005	-31.6	-15.3	1.6	-41.2	1.545	
2006	5.6	-5.7	2.2	1.8	1.518	
2007	1.6	0.0	2.1	3.7	1.463	
2008	4.8	0.6	1.0	6.5	1.374	
2009	0.4	1.4	0.2	2.0	1.347	
2010	0.4	0.0	1.5	1.9	1.322	
2011	0.0	0.0	1.4	1.4	1.304	
2012	-0.8	0.0	2.1	1.3	1.287	
2013	1.4	0.2	0.6	2.3	1.259	
2014	5.8	1.5	1.7	9.2	1.153	
2015	-0.8	0.0	2.3	1.4	1.137	
2016	0.3	0.0	1.0	1.3	1.122	
2017	0.5	0.0	2.2	2.7	1.093	
2018	0.4	0.0	2.2	2.6	1.065	
2019	0.4	0.0	2.4	2.8	1.036	
2020	0.4	0.0	0.4	0.8	1.028	
2021	0.4	0.0	1.5	1.9	1.009	
11/1/2021	0.1 (Annual 0.4)	0.0	0.7 (Annual 2.2)	0.9		

(a) Based on WCIRB evaluations of the average impact of legislative changes on the cost of indemnity benefits. These annual changes in benefits reflect the WCIRB's retrospective estimates of the cost impact of recent legislation as reflected in emerging post-reform costs. The annual cost impacts have been segregated between claim severity and claim frequency impacts.

(b) These impacts are based on the weekly wages (See Exhibit 5.1) of injured workers and the legislatively scheduled benefits for that year. Values for 2017 and prior have been updated to reflect a recent WCIRB reassessment of the impact of wage inflation on indemnity benefit levels.

(c) $\{ [\text{Column (1)} / 100 + 1.0] \times [\text{Column (2)} / 100 + 1.0] \times [\text{Column (3)} / 100 + 1.0] - 1.0 \} \times 100$.

(d) These factors represent the combined impact of the annual benefit changes on claim severity shown in Column (1), claim frequencies shown in Column (2) and wage inflation impact on benefits shown in Column (3), adjusted to the 2020 level.

(e) On-level factors for accident years 2002, 2003 and 2004 adjust the portion of permanent disability claims that are estimated to not be subject to the January 1, 2005 PDRS (95% for accident year 2002, 75% for accident year 2003 and 40% for accident year 2004) to the January 1, 2005 PDRS level, and adjust for the corresponding utilization impacts on all 2002, 2003 and 2004 indemnity claims.

Annual Medical Cost Level Change - Non-Legislative

Accident	(1) Proportion of Medical Subject to	(2) Proportion of Medical Not Subject to	(3) Impact of Fee Schedule Change on	(4) Change in Medical	(5) Impact of CPI Change on Total	(6) Annual Non-Legislative Cost Impact on
<u>Year</u>	<u>Fee Schedule (a)</u>	<u>Fee Schedule (a)</u>	<u>Total Medical (b)</u>	<u>CPI (c)</u>	<u>Medical (d)</u>	<u>Total Medical (e)</u>
1987	0.610	0.390	0.9%	7.4%	2.9%	3.8%
1988	0.649	0.351	0.8%	7.7%	3.0%	3.8%
1989	0.647	0.353	0.0%	8.6%	3.0%	3.0%
1990	0.661	0.339	0.0%	10.4%	3.7%	3.7%
1991	0.631	0.369	0.0%	10.6%	3.6%	3.6%
1992	0.628	0.372	0.0%	8.1%	3.0%	3.0%
1993	0.565	0.435	0.0%	7.3%	2.7%	2.7%
1994	0.691	0.309	-3.6%	4.3%	1.3% (i)	-2.3%
1995	0.681	0.319	0.0%	3.0%	0.9%	0.9%
1996	0.663	0.337	0.0%	3.0%	1.0%	1.0%
1997	0.643	0.357	0.0%	2.2%	0.7%	0.7%
1998	0.658	0.342	0.0%	2.2%	0.8%	0.8%
1999	0.728	0.272	1.6%	3.3%	0.9% (ii)	2.5%
2000	0.715	0.285	0.5%	4.3%	1.2%	1.7%
2001	0.722	0.278	1.5%	4.8%	1.4%	2.9%
2002	0.635	0.365	0.6%	5.1%	1.4%	2.0%
2003	0.786	0.214	0.0%	4.8%	1.4% (iii)	1.4%
2004	0.952	0.048	0.0%	5.0%	0.0% (iv),(v)	0.0%
2005	0.936	0.064	0.0%	4.8%	0.0% (v)	0.0%
2006	0.926	0.074	0.0%	4.1%	0.3%	0.3%
2007	0.923	0.077	1.4%	5.3%	0.4%	1.8%
2008	0.896	0.104	-0.1%	4.2%	0.3%	0.2%
2009	0.894	0.106	0.0%	3.6%	0.4%	0.4%
2010	0.895	0.105	0.0%	2.8%	0.3%	0.3%
2011	0.969	0.031	0.0%	3.2%	0.3%	0.3%
2012	0.969	0.031	0.0%	2.7%	0.1%	0.1%
2013	0.938	0.062	0.0%	2.6%	0.1%	0.1%
2014	0.928	0.072	0.0%	4.2%	0.3%	0.3%
2015	0.933	0.067	0.0%	3.1%	0.2%	0.2%
2016	0.918	0.082	0.0%	5.4%	0.4%	0.4%
2017	0.906	0.094	0.0%	2.2%	0.2%	0.2%
2018	0.887	0.113	0.0%	2.5%	0.2%	0.2%
2019	0.873	0.127	0.0%	3.8%	0.4%	0.4%
2020	0.873	0.127	0.0%	3.7%	0.5%	0.5%
2021	0.873	0.127	0.0%	3.5%	0.4%	0.4%
11/1/2021	0.873	0.127	0.0% (Annual 0.0%)	1.2% (Annual 3.7%)	0.2%	0.2%

- (a) From a Special Carrier Study through 1990. Based on WCIRB's Aggregate Indemnity and Medical Costs Calls for years 1991 through 2012. Based on WCIRB medical transaction data from 2013 onwards. Accident years 2011 and subsequent do not include MCCC costs.
- (b) Based on the WCIRB's evaluation of the cost impact of changes in the medical fee schedules.
- (c) Based on a component of the Consumer Price Index. Projections furnished by the California Department of Finance.
- (d) Adjusted CPI on workers' compensation medical costs that are not subject to fee schedules. The current year impact is the weighted average of 0% and Column (4), with Columns (1) and (2) from prior years as weights. (i) 1993's non-fee proportion is reduced by 13.8% due to the new medical-legal fee schedule enacted in 1994. (ii) 1998's non-fee proportion is reduced by 7.7% due to the Inpatient Hospital Fee Schedule (IHFS) effective 4/1/1999. (iii) 2002's non-fee proportion is reduced by 7.6% due to the new pharmaceutical fee schedule effective 1/1/2003. (iv) 2003's non-fee proportion is reduced by 17.2% due to the outpatient fee schedule effective 1/1/2004. (v) Given the anticipated impact of legislative reform, a 0% inflation rate has been assumed for 2004 and 2005.
- (e) Column (6) = Column (3) + Column (5).

Annual Medical Cost Level Change - Legislative

Accident Year	(1) Annual Legislative Cost Impact on Medical Severity (a)	(2) Annual Legislative Cost Impact on Medical Due to Frequency Changes (b)	(3) Annual Total Legislative Cost Impact on Medical (c)
1987	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%
1990	-0.7%	19.9%	19.1%
1991	-1.6%	14.7%	12.9%
1992	0.5%	-8.4%	-7.9%
1993	-0.7%	-18.1%	-18.7%
1994	-2.6%	0.3%	-2.3%
1995	0.0%	0.5%	0.5%
1996	0.0%	0.4%	0.4%
1997	0.0%	0.2%	0.2%
1998	12.6%	0.0%	12.6%
1999	12.6%	0.0%	12.6%
2000	7.0%	0.0%	7.0%
2001	6.6%	0.0%	6.6%
2002	-5.6%	0.0%	-5.6%
2003	-6.0%	0.0%	-6.0%
2004	-24.4%	-12.5%	-33.9%
2005	0.0%	-13.9%	-13.9%
2006	0.1%	-5.2%	-5.1%
2007	0.1%	0.0%	0.1%
2008	0.2%	0.3%	0.5%
2009	0.0%	1.0%	1.0%
2010	0.0%	0.0%	0.0%
2011	-2.0%	0.0%	-2.0%
2012	-4.4%	0.0%	-4.4%
2013	-8.2%	0.2%	-8.0%
2014	-5.9%	1.3%	-4.7%
2015	-2.0%	0.0%	-2.0%
2016	-0.5%	0.0%	-0.5%
2017	-0.4%	0.0%	-0.4%
2018	-0.3%	0.0%	-0.3%
2019	0.0%	0.0%	0.0%
2020	0.0%	0.0%	0.0%
2021	0.0%	0.0%	0.0%
11/1/2021	0.0%	0.0%	0.0%

- (a) Reflects the WCIRB's most recent estimates of the cost impact of legislation. Does not include the impact of the SB 1160 lien provisions on future medical costs as well as the estimated reductions to pharmaceutical costs attributable to SB 863, which are reflected in the medical loss development projections.
- (b) This reflects the annual percentage impact on medical costs due to changes in the frequency of indemnity claims as a result of benefit changes.
- (c) $[\text{Column (1)} + 1.0] \times [\text{Column (2)} + 1.0] - 1.0$

Total Medical Cost Level Factors

Accident Year	(1) Annual Non-Legislative Cost Impact on Medical (a)	(2) Annual Legislative Cost Impact on Medical (b)	(3) Total Annual Cost Impact on Medical (c)	(4) Composite Medical On-level Factor (d)
1987	3.8%	0.0%	3.8%	0.808
1988	3.8%	0.0%	3.8%	0.778
1989	3.0%	0.0%	3.0%	0.756
1990	3.7%	19.1%	23.5%	0.612
1991	3.6%	12.9%	16.9%	0.523
1992	3.0%	-7.9%	-5.2%	0.552
1993	2.7%	-18.7%	-16.5%	0.661
1994	-2.3%	-2.3%	-4.6%	0.693
1995	0.9%	0.5%	1.4%	0.683
1996	1.0%	0.4%	1.4%	0.673
1997	0.7%	0.2%	0.9%	0.667
1998	0.8%	12.6%	13.5%	0.588
1999	2.5%	12.6%	15.4%	0.510
2000	1.7%	7.0%	8.8%	0.468
2001	2.9%	6.6%	9.7%	0.427
2002	2.0%	-5.6%	-3.7%	0.443
2003	1.4%	-6.0%	-4.7%	0.465
2004	0.0%	-33.9%	-33.9%	0.703
2005	0.0%	-13.9%	-13.9%	0.817
2006	0.3%	-5.1%	-4.8%	0.858
2007	1.8%	0.1%	1.9%	0.842
2008	0.2%	0.5%	0.7%	0.836
2009	0.4%	1.0%	1.4%	0.825
2010	0.3%	0.0%	0.3%	0.822
2011	0.3%	-2.0%	-1.7%	0.836
2012	0.1%	-4.4%	-4.3%	0.874
2013	0.1%	-8.0%	-7.9%	0.949
2014	0.3%	-4.7%	-4.4%	0.993
2015	0.2%	-2.0%	-1.8%	1.011
2016	0.4%	-0.5%	-0.1%	1.012
2017	0.2%	-0.4%	-0.2%	1.014
2018	0.2%	-0.3%	-0.1%	1.015
2019	0.4%	0.0%	0.4%	1.011
2020	0.5%	0.0%	0.5%	
2021	0.4%	0.0%	0.4%	
11/1/2021	0.2%	0.0%	0.2%	

(a) See Exhibit 4.2, Column (6).

(b) See Exhibit 4.3, Column (3).

(c) $\text{Column (3)} = [1.0 + \text{Column (1)}] \times [1.0 + \text{Column (2)}] - 1.0$.

(d) These factors adjust the annual impact shown in Column (3) to the 11/1/2021 level.

Annual Wage Level Changes

<u>Year</u>	<u>Annual Wage Level Change (a)</u>	<u>Factor to a 11/1/2021 Wage Level</u>
1987	5.6	3.166
1988	4.4	3.032
1989	4.3	2.907
1990	5.0	2.769
1991	2.3	2.707
1992	4.7	2.585
1993	1.2	2.554
1994	1.8	2.509
1995	2.9	2.439
1996	3.4	2.358
1997	4.7	2.252
1998	5.2	2.141
1999	6.2	2.016
2000	9.0	1.850
2001	0.6	1.839
2002	1.1	1.819
2003	3.6	1.755
2004	5.0	1.672
2005	3.2	1.620
2006	4.6	1.549
2007	4.5	1.482
2008	2.1	1.452
2009	0.5	1.444
2010	3.0	1.402
2011	3.0	1.361
2012	4.2	1.307
2013	0.7	1.297
2014	3.3	1.256
2015	4.4	1.203
2016	1.8	1.182
2017	4.2	1.134
2018	4.1	1.090
2019	4.1	1.047
Projected:		
2020	0.7	(b)
2021	2.6	
11/1/2021	1.3	(Annual = 3.8)

- (a) Historical wage changes through 2018 are based on Bureau of Labor Statistics data. Forecasts for 2019 and forward are based on the average of wage level projections made by the UCLA Anderson School of Business as of March 2020 and those made by the California Department of Finance as of April 2020.
- (b) The average wage change for 2020 was judgmentally decreased by 0.8% to reflect the estimated difference between growth in median wages and average wages during a recession.

Premium Adjustment Factors

	(1)	(2a)	(2b)	(2c)	(3)	(4)	(5)	(6)	(7)
		Ratio of Industry Average Charged Rates to Advisory Pure Premium	Factor to Industry Average Filled Pure Premium Rate Level as of	Factor to Adjust Insurer Premium to an Industry Average Filled Pure Premium Rate Level as of	Adjustment to Remove Surcharge	Average Experience	Off-Balance Correction in Advisory January 1, 2020 Pure Premium	Factor to Adjust for Impact of Premium Resulting from	Composite Premium Adjustment
Calendar Year	Wage Level (a)	Rates (b)	July 1, 2020 (c)	July 1, 2020 (d)	Premium (e)	Modification (f)	Rates	Audits (g)	Factor (h)
1987	3.166	---	---	0.574	0.992	0.983	1.014	---	1.807
1988	3.032	---	---	0.513	0.993	0.963	1.014	---	1.583
1989	2.907	---	---	0.506	0.993	0.945	1.014	---	1.523
1990	2.769	---	---	0.493	0.991	0.942	1.014	---	1.416
1991	2.707	---	---	0.457	0.987	0.939	1.014	---	1.281
1992	2.585	---	---	0.438	0.982	0.940	1.014	---	1.165
1993	2.554	---	---	0.433	0.981	0.949	1.014	---	1.127
1994	2.509	---	---	0.495	0.986	0.948	1.014	---	1.275
1995	2.439	---	---	0.670	0.995	0.958	1.014	---	1.674
1996	2.358	1.023	0.712	0.696	1.000	0.935	1.014	---	1.731
1997	2.252	0.989	0.710	0.718	1.000	0.949	1.014	---	1.681
1998	2.141	0.965	0.740	0.767	1.000	0.959	1.014	---	1.688
1999	2.016	0.972	0.748	0.769	1.000	0.954	1.014	---	1.603
2000	1.850	1.005	0.678	0.675	1.000	0.970	1.014	---	1.269
2001	1.839	1.030	0.597	0.580	1.000	0.969	1.014	---	1.085
2002	1.819	1.157	0.534	0.462	1.000	0.991	1.014	---	0.836
2003	1.755	1.266	0.437	0.346	1.000	1.005	1.014	---	0.595
2004	1.672	1.397	0.445	0.319	1.000	0.981	1.014	---	0.535
2005	1.620	1.470	0.535	0.364	1.000	0.982	1.014	---	0.593
2006	1.549	1.446	0.690	0.477	1.000	0.956	1.014	---	0.762
2007	1.482	1.492	0.940	0.630	1.000	0.931	1.014	0.985	0.974
2008	1.452	1.426	1.119	0.785	1.000	0.946	1.014	0.991	1.177
2009	1.444	1.365	1.102	0.808	1.000	0.937	1.014	1.034	1.269
2010	1.402	1.383	1.081	0.781	1.000	0.941	1.014	1.005	1.154
2011	1.361	1.400	1.080	0.771	1.000	0.982	1.014	---	1.054
2012	1.307	1.222	0.890	0.728	1.000	1.000	1.014	---	0.938
2013	1.297	1.138	0.717	0.630	1.000	0.983	1.014	---	0.820
2014	1.256	1.126	0.660	0.586	1.000	0.961	1.014	---	0.756
2015	1.203	1.109	0.641	0.579	1.000	0.951	1.014	---	0.722
2016	1.182	1.148	0.698	0.608	1.000	0.949	1.014	---	0.747
2017	1.134	1.156	0.773	0.668	1.000	0.955	1.014	---	0.783
2018	1.090	1.196	0.874	0.730	1.000	0.956	1.014	---	0.821
2019	1.047	1.215	1.015	0.836	1.000	0.949	1.014	---	0.909

- (a) See Exhibit 5.1.
- (b) Based on WCIRB calendar year experience calls. The industry average charged rates reflect most rating plan adjustments but do not reflect the application of deductible credits or retrospective rating plan adjustments.
- (c) Reflects (1) advisory pure premium rate level changes to bring premium to the advisory January 1, 2020 pure premium rate level and (2) an additional adjustment factor, which is the ratio of the average advisory January 1, 2020 pure premium rate (\$1.52) to the industry average filed pure premium rate as of July 1, 2020 (\$1.80).
- (d) $(2b) \div (2a)$. This column adjusts premiums at the industry average charged rate level to the industry average filed pure premium rate level as of July 1, 2020.
- (e) Based on unit statistical data.
- (f) Based on average promulgated experience modifications. Calendar years 1996 through 2000 include adjustments for the impacts of AB 1913 and SB 1217 (1998).
- (g) Based on a comparison of premium reported on a calendar year basis to premium reported on an estimated ultimate policy year basis over the course of two accident years. The factor is applied only for calendar years 2007 to 2010, during which reported premiums were impacted by recessionary economic forces.
- (h) $(1) \times (2c) \times (3) \times (6) \div [(4) \times (5)]$ for calendar years 2007 to 2010. $(1) \times (2c) \times (3) \div [(4) \times (5)]$ for all other calendar years.

Accident Year Indemnity Claim Frequency Model
As of PY 2017 1st Set & June 2020 UCLA

AY	Annual % Changes Intra- Class Ind Freq	Intra-Class Indemnity Frequency per \$M Exposure at PY 2018 Level				Annual Log Differences		
		Total	Cumulative	Non-cum.	AY+1 Indemnity Benefit Level	Cumulative Injury Index	Economic Variables (1st Prin. Comp.)	CalOSHA Dummy Variable
1979	0.5%	0.005	-0.053	0.007	0.000	-0.060	0.134	0.000
1980	-6.5%	-0.068	-0.132	-0.066	0.033	-0.066	-0.080	0.000
1981	-3.5%	-0.036	-0.028	-0.036	0.000	0.008	-0.079	0.000
1982	-1.6%	-0.016	0.153	-0.022	0.352	0.175	-0.294	0.000
1983	6.2%	0.060	0.214	0.054	0.081	0.160	0.029	0.000
1984	9.5%	0.091	0.235	0.084	0.000	0.151	0.222	0.000
1985	2.0%	0.020	0.138	0.014	0.000	0.124	0.081	0.000
1986	-2.4%	-0.024	0.039	-0.028	0.000	0.067	0.078	0.000
1987	1.5%	0.015	0.053	0.013	0.000	0.041	0.151	0.000
1988	0.7%	0.007	0.104	0.000	0.000	0.104	0.088	0.000
1989	2.5%	0.024	0.212	0.009	0.046	0.203	0.045	0.000
1990	9.0%	0.087	0.337	0.061	0.071	0.276	-0.121	0.000
1991	0.3%	0.003	0.166	-0.018	0.023	0.184	-0.293	0.000
1992	-11.1%	-0.118	-0.272	-0.098	0.013	-0.174	-0.186	0.068
1993	-14.9%	-0.162	-0.240	-0.153	-0.057	-0.088	-0.022	0.464
1994	-12.8%	-0.136	-0.462	-0.107	0.061	-0.355	0.106	0.173
1995	-4.6%	-0.048	-0.016	-0.050	0.053	0.034	0.092	0.295
1996	-6.8%	-0.070	-0.136	-0.065	0.096	-0.071	0.075	0.000
1997	-3.3%	-0.033	-0.023	-0.034	0.066	0.011	0.137	0.000
1998	-3.8%	-0.038	-0.040	-0.038	0.058	-0.002	0.079	0.000
1999	1.5%	0.014	0.100	0.008	0.040	0.092	0.128	0.000
2000	4.0%	0.039	0.071	0.037	-0.003	0.034	0.066	0.000
2001	-6.9%	-0.072	-0.018	-0.076	-0.007	0.059	-0.101	0.000
2002	-2.3%	-0.023	0.007	-0.026	0.060	0.033	-0.202	0.000
2003	-2.9%	-0.029	-0.005	-0.031	-0.065	0.026	-0.023	0.000
2004	-16.6%	-0.182	-0.209	-0.180	-0.398	-0.030	0.093	0.000
2005	-13.6%	-0.146	-0.298	-0.133	0.051	-0.165	0.141	0.000
2006	-5.7%	-0.059	-0.050	-0.059	0.016	0.009	0.095	0.000
2007	-1.6%	-0.017	0.021	-0.019	0.049	0.040	-0.084	0.000
2008	-2.7%	-0.027	0.038	-0.033	0.006	0.071	-0.308	0.000
2009	-0.2%	-0.002	0.168	-0.018	0.066	0.186	-0.427	0.000
2010	8.9%	0.085	0.139	0.079	0.012	0.060	-0.092	0.000
2011	1.2%	0.012	0.032	0.010	0.003	0.022	0.043	0.000
2012	4.7%	0.046	0.127	0.036	0.025	0.091	0.123	0.000
2013	0.4%	0.004	0.126	-0.013	0.071	0.139	0.151	0.000
2014	0.2%	0.002	0.050	-0.006	0.003	0.056	0.178	0.000
2015	-1.3%	-0.013	0.025	-0.018	0.002	0.043	0.193	0.000
2016	-2.5%	-0.026	0.061	-0.040	0.004	0.101	0.124	0.000
2017	-2.1%	-0.022	-0.043	-0.018	0.004	-0.025	0.137	0.000
2018*	-1.0%	-0.010	-0.084	0.004	0.003	-0.088	0.120	0.000
2019	-1.4%	-0.014	-0.014	-0.014	0.004	0.000	0.054	0.000
2020	-6.8%	-0.071	0.021	-0.088	0.004	0.109	-0.958	0.000
2021	0.5%	0.005	0.001	0.005	0.004	-0.004	0.249	0.000
2022	0.0%	0.000	0.000	0.000	0.004	0.000	0.185	0.000

Y = Hazardousness-Adjusted Noncumulative Indemnity Claim Frequency

Constant	-0.020
Std Err of Y Est	0.040
R Squared	0.566
No. of Observations	40
Degrees of Freedom	35

X Coefficient(s)	0.178	0.273	0.103	-0.145
Std Err of Coef.	0.072	0.061	0.043	0.076

Notes:

Indemnity Benefit Level variable is leading. The benefit level change for AY 2004 is related to the AY 2003 change in non-cumulative frequency.

The Indemnity Benefit Level change for Ogilvie & Almaraz / Guzman in 2009-2010 is not leading.

The Indemnity Benefit Level variable excludes indemnity benefit utilization, and changes in the death and permanent total benefits.

The Indemnity Benefit Level variable has been revised due to on-leveling reassessments. See Actuarial Committee item AC09-03-03.

For 1993 on, cumulative claims include both cumulative trauma and occupational disease claims. See March 19, 2014 Actuarial Committee Agenda Item III.

Economic variables are historical through 2019; June 2020 UCLA Anderson Forecasts for 2020 on.

Regression is over AY 1979 through AY 2018. AY 2019 through AY 2022 are projections.

The constant term, -0.020, consists of measured offsets that recognize annual changes in real benefit levels relative to nominal benefit levels and long-term economic growth. Without these offsets, the indemnity benefit level and economic variables would project frequency to increase without bound.

*AY 2018 change is based on a comparison of 2018 accidents on 2017 policies to 2017 accidents on 2016 policies.

The Cumulative Injury Index forecast for 2020 and 2021 is based on the average change from the prior two recessions.

**Projection of Indemnity Severity Trends by Accident Year
Based on Experience as of March 31, 2020**

Accident Year	(1) Estimated Ultimate Severity	(2) Annual % Change	(3) Indemnity Adjustment Factor (a)	(4) Ultimate On-level Severity (1) x (3)	(5) Annual % Change
1990	9,954	---	1.912	19,034	---
1991	10,874	9.2%	1.808	19,665	3.3%
1992	10,970	0.9%	1.749	19,181	-2.5%
1993	11,926	8.7%	1.738	20,728	8.1%
1994	12,839	7.7%	1.821	23,375	12.8%
1995	14,381	12.0%	1.696	24,385	4.3%
1996	16,124	12.1%	1.591	25,657	5.2%
1997	19,155	18.8%	1.428	27,347	6.6%
1998	20,996	9.6%	1.317	27,649	1.1%
1999	23,002	9.6%	1.220	28,067	1.5%
2000	24,428	6.2%	1.139	27,826	-0.9%
2001	26,899	10.1%	1.140	30,672	10.2%
2002	26,007	-3.3%	1.168	30,375	-1.0%
2003	25,683	-1.2%	1.164	29,903	-1.6%
2004	20,973	-18.3%	1.375	28,848	-3.5%
2005	18,969	-9.6%	1.579	29,952	3.8%
2006	20,658	8.9%	1.463	30,224	0.9%
2007	22,498	8.9%	1.410	31,731	5.0%
2008	24,517	9.0%	1.332	32,668	3.0%
2009	25,708	4.9%	1.325	34,052	4.2%
2010	25,220	-1.9%	1.300	32,780	-3.7%
2011	24,941	-1.1%	1.282	31,970	-2.5%
2012	24,369	-2.3%	1.266	30,850	-3.5%
2013	23,827	-2.2%	1.240	29,556	-4.2%
2014	24,765	3.9%	1.153	28,554	-3.4%
2015	24,943	0.7%	1.137	28,350	-0.7%
2016	24,266	-2.7%	1.122	27,234	-3.9%
2017	24,248	-0.1%	1.093	26,504	-2.7%
2018	25,101	3.5%	1.065	26,727	0.8%
2019	25,985	3.5%	1.036	26,921	0.7%

(6) Estimated Annual Exponential Trend Based on 1990 to 2019: 1.1%

(7) Estimated Annual Exponential Trend Based on 2005 to 2019: -1.4%

(8) Estimated Annual Exponential Trend Based on 2015 to 2019: -1.2%

Selected Indemnity Severity Trend: 1.0%

(a) These adjustment factors are based on Exhibit 4.1, excluding the impact of frequency.

Source: WCIRB experience calls.

**Projection of Medical Severity Trends by Accident Year
Based on Experience as of March 31, 2020**

Accident Year	(1) Estimated Ultimate Severity (a)	(2) Annual % Change	(3) Medical Adjustment Factor (b)	(4) Ultimate On-level Severity (1) x (3)	(5) Annual % Change
1990	8,777	---	0.917	8,046	---
1991	9,449	7.7%	0.899	8,497	5.6%
1992	9,505	0.6%	0.869	8,257	-2.8%
1993	10,371	9.1%	0.852	8,834	7.0%
1994	11,335	9.3%	0.895	10,147	14.9%
1995	13,041	15.0%	0.887	11,569	14.0%
1996	14,041	7.7%	0.878	12,333	6.6%
1997	16,730	19.2%	0.872	14,593	18.3%
1998	20,286	21.3%	0.769	15,591	6.8%
1999	23,366	15.2%	0.666	15,559	-0.2%
2000	26,125	11.8%	0.612	15,986	2.7%
2001	31,121	19.1%	0.558	17,361	8.6%
2002	31,373	0.8%	0.579	18,176	4.7%
2003	29,972	-4.5%	0.608	18,218	0.2%
2004	27,663	-7.7%	0.804	22,242	22.1%
2005	28,527	3.1%	0.804	22,936	3.1%
2006	31,074	8.9%	0.801	24,884	8.5%
2007	34,688	11.6%	0.786	27,260	9.5%
2008	37,351	7.7%	0.783	29,236	7.2%
2009	39,338	5.3%	0.780	30,669	4.9%
2010	39,578	0.6%	0.777	30,763	0.3%
2011	35,909 (c)	---	0.799	28,689 (c)	---
2012	33,728	-6.1%	0.844	28,456	-0.8%
2013	31,268	-7.3%	0.928	29,024	2.0%
2014	30,263	-3.2%	0.988	29,891	3.0%
2015	29,354	-3.0%	1.011	29,676	-0.7%
2016	28,210	-3.9%	1.012	28,549	-3.8%
2017	28,122	-0.3%	1.014	28,517	-0.1%
2018	29,230	3.9%	1.015	29,671	4.0%
2019	28,686	-1.9%	1.011	29,002	-2.3%

Selected Medical Severity Trend:

2.5%

(a) Estimated ultimate severities for all accident years are derived by dividing ultimate medical losses on indemnity claims by ultimate indemnity claim counts. The estimated ultimate medical severities were derived from the projected ultimate loss ratios shown in Exhibit 3.2, column (6).

(b) These adjustment factors are based on Exhibit 4.4, excluding the impact of frequency, and including the impact of SB 1160 provisions applicable to outstanding medical losses.

(c) Severities for accident years 2011 and subsequent do not reflect the cost of medical cost containment programs (MCCP). Severities for accident years 2010 and prior do reflect MCCP costs.

Source: WCIRB experience calls.

**Projection of Medical Severity Trends by Accident Year
Adjusted to Remove the Cost of Medical Cost Containment Programs (MCCP)
Based on Experience as of March 31, 2020**

(1) Accident Year	MCCP Included				MCCP Removed Based on WCIRB Aggregate Calendar Year Data Calls (b)			
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Estimated Ultimate Severity (a)	Annual % Change	Ultimate On-Level Severity (c)	Annual % Change	Estimated Ultimate Severity (a)	Annual % Change	Ultimate On-Level Severity (c)	Annual % Change
2005	28,527	---	22,936	---	27,051	---	21,749	---
2006	31,074	8.9%	24,884	8.5%	29,155	7.8%	23,348	7.4%
2007	34,688	11.6%	27,260	9.5%	32,408	11.2%	25,468	9.1%
2008	37,351	7.7%	29,236	7.2%	34,113	5.3%	26,701	4.8%
2009	39,338	5.3%	30,669	4.9%	36,085	5.8%	28,132	5.4%
2010	39,578	0.6%	30,763	0.3%	36,268	0.5%	28,191	0.2%
2011	39,318	-0.7%	31,412	2.1%	35,909	-1.0%	28,689	1.8%
2012	36,863	-6.2%	31,101	-1.0%	33,728	-6.1%	28,456	-0.8%
2013	34,265	-7.0%	31,806	2.3%	31,268	-7.3%	29,024	2.0%
2014	33,130	-3.3%	32,722	2.9%	30,263	-3.2%	29,891	3.0%
2015	32,053	-3.2%	32,406	-1.0%	29,354	-3.0%	29,676	-0.7%
2016	30,742	-4.1%	31,111	-4.0%	28,210	-3.9%	28,549	-3.8%
2017	30,720	-0.1%	31,152	0.1%	28,122	-0.3%	28,517	-0.1%
2018	32,097	4.5%	32,581	4.6%	29,230	3.9%	29,671	4.0%
2019	31,610	-1.5%	31,959	-1.9%	28,686	-1.9%	29,002	-2.3%

Estimated Annual Exponential Trend

Trend Based on 1990 to 2019:

Trend Based on 2005 to 2019:

Trend Based on 2015 to 2019:

5.5%
1.9%
0.2%

Selected Medical Severity Trend:

2.5%

- (a) Estimated ultimate severities for all accident years were derived by dividing ultimate medical losses on indemnity claims by ultimate indemnity claim counts.
 (b) Adjustments to accident years 2005 through 2010 based on WCIRB's Annual Calls for Direct California Workers' Compensation Aggregate Indemnity and Medical Costs.
 (c) Ultimate severities are on-leveled based on adjustment factors shown on Exhibit 6.3.

Source: WCIRB experience calls.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1)×(2)÷(3)
1987	0.346	1.536	1.807	0.294
1988	0.331	1.514	1.583	0.317
1989	0.344	1.491	1.523	0.337
1990	0.399	1.196	1.416	0.337
1991	0.425	0.985	1.281	0.327
1992	0.350	1.038	1.165	0.312
1993	0.288	1.260	1.127	0.322
1994	0.326	1.318	1.275	0.337
1995	0.471	1.220	1.674	0.343
1996	0.528	1.140	1.731	0.348
1997	0.598	1.021	1.681	0.363
1998	0.650	0.942	1.688	0.362
1999	0.683	0.873	1.603	0.372
2000	0.590	0.815	1.269	0.379
2001	0.490	0.815	1.085	0.368
2002	0.365	0.835	0.836	0.365
2003	0.241	0.833	0.595	0.337
2004	0.144	1.140	0.535	0.307
2005	0.124	1.545	0.593	0.322
2006	0.160	1.518	0.762	0.319
2007	0.221	1.463	0.974	0.332
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.267	1.287	0.938	0.366
2013	0.230	1.259	0.820	0.352
2014	0.219	1.153	0.756	0.334
2015	0.213	1.137	0.722	0.336
2016	0.202	1.122	0.747	0.303
2017	0.206	1.093	0.783	0.287
2018	0.221	1.065	0.821	0.286
2019	0.253	1.036	0.909	0.288
				Projections (d)
2020				0.273
2021				0.277
11/1/2021				0.278

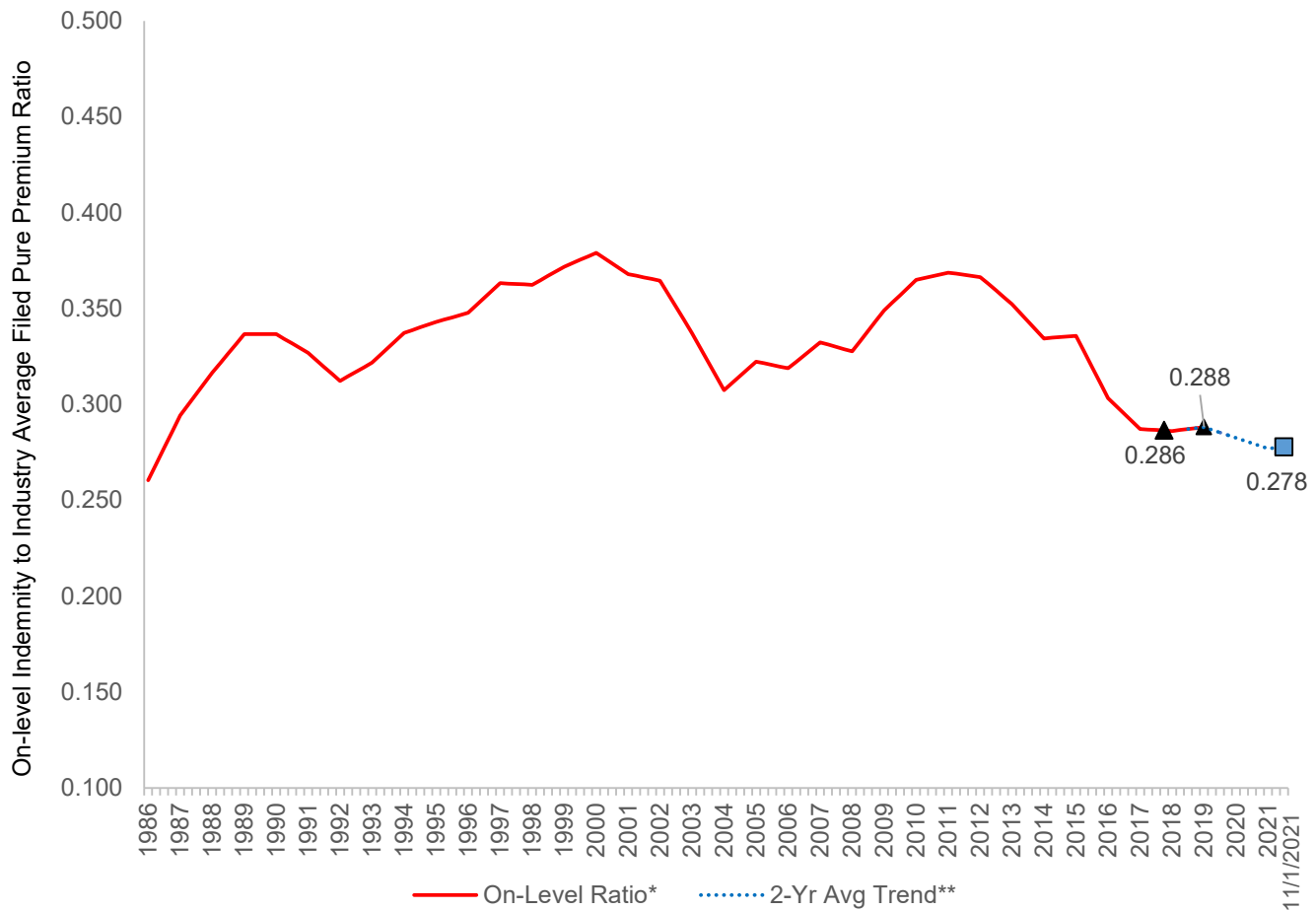
(a) See Exhibit 3.1.

(b) See Exhibit 4.1.

(c) See Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 through 2022 from Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**On-Level Indemnity Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of March 31, 2020**



* On-level indemnity to industry average filed pure premium ratios (see Exhibit 7.1)

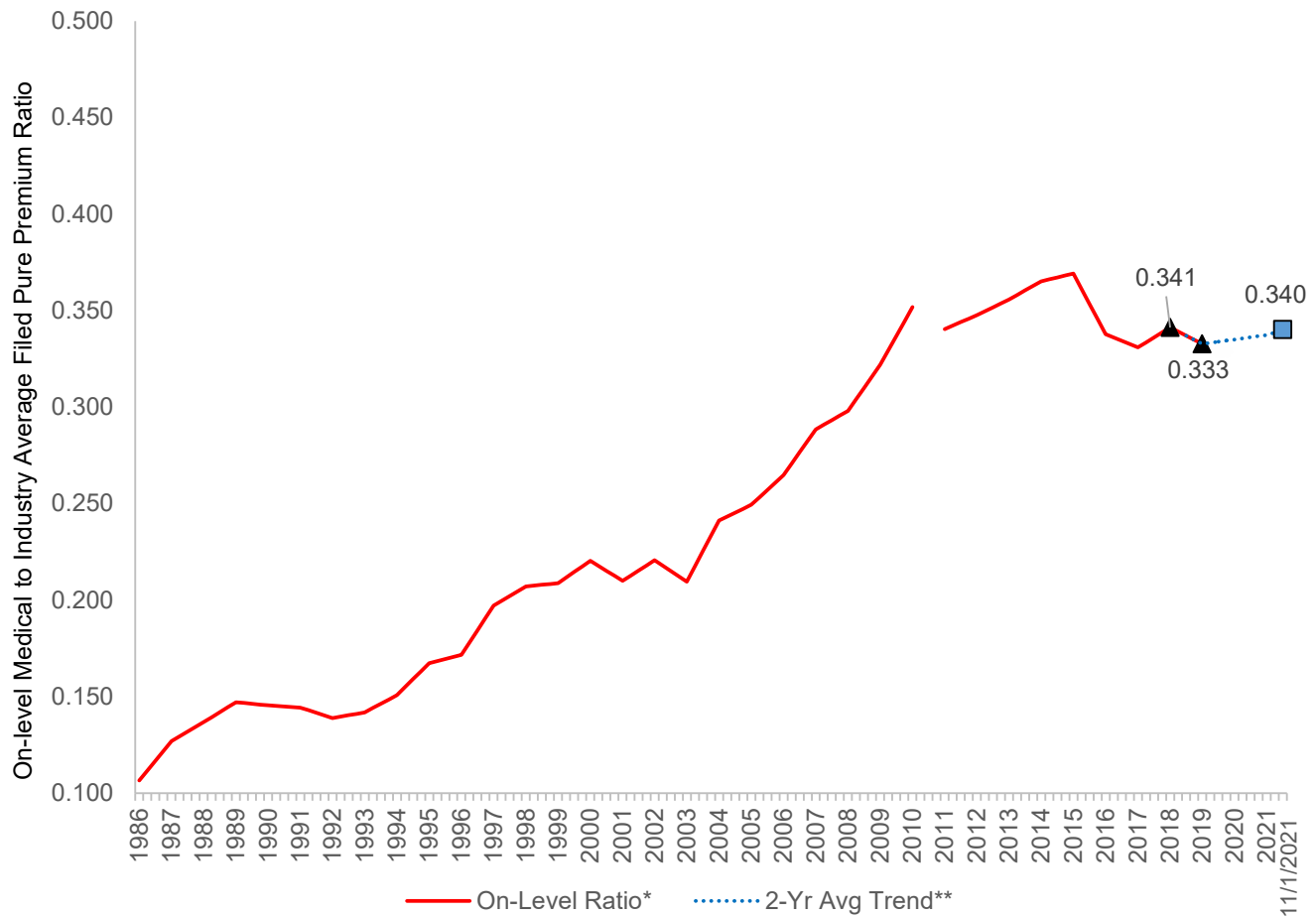
** The 11/1/2021 indemnity to industry average filed pure premium ratio was calculated based on separate frequency and severity trends applied to the 2018 and 2019 years.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical On-Level Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio (e) (1)×(2)÷(3)
1987	0.284	0.808	1.807	0.127
1988	0.278	0.778	1.583	0.137
1989	0.297	0.756	1.523	0.147
1990	0.337	0.612	1.416	0.145
1991	0.353	0.523	1.281	0.144
1992	0.293	0.552	1.165	0.139
1993	0.242	0.661	1.127	0.142
1994	0.278	0.693	1.275	0.151
1995	0.410	0.683	1.674	0.167
1996	0.441	0.673	1.731	0.172
1997	0.497	0.667	1.681	0.197
1998	0.595	0.588	1.688	0.207
1999	0.657	0.510	1.603	0.209
2000	0.597	0.468	1.269	0.220
2001	0.534	0.427	1.085	0.210
2002	0.416	0.443	0.836	0.221
2003	0.268	0.465	0.595	0.210
2004	0.184	0.703	0.535	0.241
2005	0.181	0.817	0.593	0.249
2006	0.235	0.858	0.762	0.265
2007	0.334	0.842	0.974	0.289
2008	0.419	0.836	1.177	0.298
2009	0.496	0.825	1.269	0.322
2010	0.494	0.822	1.154	0.352
2011	0.429	0.836	1.054	0.340
2012	0.373	0.874	0.938	0.348
2013	0.307	0.949	0.820	0.356
2014	0.278	0.993	0.756	0.365
2015	0.264	1.011	0.722	0.369
2016	0.249	1.012	0.747	0.338
2017	0.255	1.014	0.783	0.331
2018	0.276	1.015	0.821	0.341
2019	0.299	1.011	0.909	0.333
				Projections (d)
2020				0.328
2021				0.337
11/1/2021				0.340

- (a) See Exhibit 3.2. Medical loss ratios for accident years 2011 and subsequent do not reflect the cost of medical cost containment programs (MCCP). Ratios for accident years 2010 and prior do reflect MCCP costs.
- (b) See Exhibit 4.4.
- (c) See Exhibit 5.2.
- (d) These on-level ratios were projected based on an estimated annual medical severity trend from Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 through 2022 from Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect the paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**On-Level Medical Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of March 31, 2020**



* On-level medical to industry average filed pure premium ratios (see Exhibit 7.3)

** The 11/1/2021 medical to industry average filed pure premium ratio was calculated based on separate frequency and severity trends applied to the 2018 and 2019 years.

**Indicated Loss to Industry Average Filed Pure Premium Ratios and Average Pure Premium Rate
For Policies with Effective Dates between January 1, 2021 and August 31, 2021
Based on Experience as of March 31, 2020**

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
1. Projected Loss to Industry Average Filed Pure Premium Ratio (See Exhibits 7.1 and 7.3)	0.278	0.340	0.618
2. Projected Loss Adjustment Expense Factor (ALAE + M CCP + ULAE, See Appendix C)			1.340
3. Indicated Total Loss and Loss Adjustment Expense to Industry Average Filed Pure Premium Ratio Prior to the Impact of COVID-19 Claims (1) x (2)			0.828
4. Impact of COVID-19 Claims on January 1, 2021 to August 31, 2021 Policies (See Appendix D)			3.8%
5. Indicated Total Loss and Loss Adjustment Expense to Industry Average Filed Pure Premium Ratio After Reflecting Impact of COVID-19 Claims (3) x [1.0 + (4)]			0.860
6. Difference in Off-Balance Factor (See Section C, Appendix B of the WCIRB's January 1, 2021 Regulatory Filing)			0.5%
7. Indicated Difference from Industry Average Filed Pure Premium Rate per \$100 of Payroll as of July 1, 2020 [(5) x [(6) + 1.0] - 1.0]			-13.6%
8. Industry Average Filed Pure Premium Rate per \$100 of Payroll as of July 1, 2020			\$1.80
9. Indicated Average Pure Premium Rate per \$100 of Payroll for Policies with Effective Dates between January 1, 2021 and August 31, 2021 (8) x [1.0 + (7)]			\$1.56

Section B
Appendix A
Loss Development Methodology

The pure premium rates effective January 1, 2021 are intended to reflect the final or ultimate cost of losses and loss adjustment expenses on all accidents that arise on policies incepting during the January 1, 2021 to August 31, 2021 period. The information shown in Section B, Exhibit 1 reflects paid and incurred (paid plus case reserves) loss amounts reported for each completed accident year as of March 31, 2020. However, since workers' compensation claims incurred in a particular year will be paid out over many years and pure premium rates are intended to reflect the ultimate cost of losses and loss adjustment expenses, the WCIRB develops the reported cost of claims for each accident year that are valued as of March 31, 2020 to a final, or ultimate, cost basis.

The WCIRB generally estimates the development of more current accident year losses based on the historical development patterns of more mature accident years. The development of both historical paid losses and incurred losses for each accident year is reviewed. The historical incurred loss development in each evaluation period is shown in Section B, Exhibits 2.1.1 and 2.1.2 for indemnity and 2.2.1 and 2.2.2 for medical. The historical paid loss development in each evaluation period is shown in Section B, Exhibits 2.3.1 and 2.3.2 for indemnity and 2.4.1 and 2.4.2 for medical.¹ These factors represent the year-to-year changes, based on successive March 31 evaluations, in the reported aggregate cost of all claims that occurred during a particular year. The changes in reported incurred losses may result from (a) claims that have occurred but had not yet been reported at the time of the prior evaluation, (b) reopening of previously closed claims as further disability payments or the need for further medical treatment arises, or (c) changes in the estimated cost of open claims as additional information becomes available or the claim is settled. Changes in the paid losses reported for each accident year occur as additional payments are made to injured workers for statutory indemnity benefits or for injured workers' medical treatments.

In addition to reported paid losses and case reserves, a bulk reserve for incurred but not reported (IBNR) losses is also reported to the WCIRB. This amount represents insurers' estimates of anticipated future losses that are in excess of the incurred losses reported to the WCIRB as of March 31, 2020. The WCIRB does not use reported IBNR to estimate the ultimate cost of each accident year's losses. Instead, the development of reported incurred losses (excluding IBNR reserves) and paid losses is reviewed, and future loss development is projected based on these historical development patterns. This approach produces more accurate estimates of the ultimate cost of losses arising from a given accident year than estimates based solely on the IBNR amounts reported by insurers. The WCIRB has been using this method of projecting loss development based on the reported paid and incurred losses, excluding the IBNR reserves reported by insurers, for many years.

Based on a comprehensive analysis of historical loss development as well as other information relevant to estimating future development, the WCIRB projects the amount of losses reported for each accident year valued as of March 31, 2020 to an ultimate cost basis. The projected ultimate losses are derived based on selected annual loss development, or "age-to-age", factors for each evaluation period.

¹ Beginning with policies incepting on or after July 1, 2010, the cost of medical cost containment programs (MCCP) is reported as allocated loss adjustment expense (ALAE) rather than as medical loss. The medical loss development factors shown in Section B, Exhibits 2.2, 2.4 and 2.6 for accident years 2009 and prior include MCCP costs reported as medical loss. The medical loss development factors shown in those exhibits for accident years 2012 and subsequent do not include any MCCP costs. For consistency of comparison, the medical loss development factors for accident years 2010 and 2011 shown in those exhibits are computed after moving the portion of MCCP paid costs reported as ALAE into medical loss.

Over the years, the WCIRB has used a number of methodologies to estimate future loss development. Since each methodology is predicated on a different set of underlying assumptions, no single methodology is appropriate for all conditions. As a result, the development methodology upon which the proposed pure premium rates are based is selected following the WCIRB's analysis of the underlying claims environment. This analysis includes a review of incurred and paid loss development and several system diagnostics that may impact incurred or paid loss development patterns.

Methodologies basing estimates of future loss development primarily on historical incurred age-to-age loss development factors may work well during periods of relatively consistent levels of case reserves. However, they are not appropriate when (a) there is a change in the average level of insurer case reserves, (b) incurred loss development is volatile, or (c) there are significant legislative or regulatory changes.

Several prior WCIRB analyses of loss development methodologies have shown that (a) there is significantly more variability in incurred loss development patterns across insurer groups than in paid loss development patterns, (b) incurred loss development has historically been more volatile and cyclical than paid loss development, (c) retrospectively over the long term, projections based on incurred loss development are generally less accurate and less stable than those based on paid loss development, (d) while the impact of statutory reform measures on payment patterns can be estimated and paid development factors adjusted accordingly, reform impacts on case reserves and incurred development factors are much more difficult to estimate, and (e) while the change in reporting requirements for MCCP costs effective on policies incepting on or after July 1, 2010 can reliably be adjusted for in paid medical losses, the impact of the change on insurer case reserves is uncertain. As a result, the WCIRB has, for many years, been estimating future loss development primarily based on historical paid age-to-age development factors.

Following the implementation of Senate Bill No. 863 (SB 863), both paid and incurred loss development have been decreasing. Although the decreases in paid and incurred loss development have continued into the most recent calendar year, these decreases have been more modest compared to prior years. The WCIRB adjusts for a number of the factors related to the recent loss development decreases, including accelerating claim settlement rates, reforms to lien filings from Senate Bill No. 1160 (SB 1160) and Assembly Bill No. 1244 (AB 1244), and recent pharmaceutical cost declines in its selected loss development methodology. While the WCIRB has a reasonable basis to reflect the impact of these factors on paid loss development, the WCIRB is not able to determine their impact on incurred loss development given that their impact on case reserve levels is difficult to measure and may differ significantly by insurer.

Loss Development Methodology – Diagnostic Indicators

To assess the validity of the assumptions underlying the various methodologies, the WCIRB reviews a number of diagnostic indicators. Among the key indicators of loss development reviewed are the following:

1. Ratio of Paid Losses to Incurred Losses. Exhibits 1.1 and 1.2 show the ratios of paid to incurred indemnity and medical losses by accident year at comparable evaluation periods. Changes in ratios of paid to incurred losses can be indicative of changes in the rate at which losses are paid, changes in case reserve levels, shifts in the types of claims, or any combination of these phenomena. After several years of stable ratios of paid to incurred losses, these ratios for both indemnity and medical decreased dramatically starting in the early 1990s, particularly at more mature evaluation periods, suggesting a slowdown in payment patterns. Recently, paid-to-incurred medical ratios have generally increased for most evaluations, which is primarily a result of the significant reductions in case reserve levels over the last few years. However, these ratios continue to be generally well below the levels experienced prior to the early 1990s.

2. Average Case Outstanding per Open Claim; Average Paid per Closed Claim. Exhibit 2.1 shows average accident year case outstanding indemnity per open indemnity claim. Exhibit 2.2 displays, for comparison purposes, average paid indemnity per closed indemnity claim. For indemnity, average case outstanding per open indemnity claim severities are increasing at a rate generally greater than the increases in average paid per closed indemnity claim, particularly for less mature periods. This suggests that case reserve strengthening could be impacting incurred indemnity development.

Exhibit 2.3 shows the average accident year case outstanding medical per open indemnity claim while Exhibit 2.4 shows the average paid medical on closed indemnity claims.² Changes in average case outstanding medical per open indemnity claim severities for the most recent calendar year are mixed but generally increasing. Comparatively, average paid medical per closed indemnity claim has increased for less mature evaluations but declined modestly for more mature evaluations. This suggests that a shift in medical case reserve levels may be impacting incurred medical development for more mature periods.

3. Accident Year Claim Settlement Ratios. The percentage of accident year estimated ultimate indemnity claims closed by evaluation period is shown in Exhibit 3. These ratios have increased at a steady rate over the last several years since the implementation of SB 863. Although the indemnity claim settlement rate for accident years 2018 and 2019 at the most recent evaluation increased modestly over that for the prior year, indemnity claim settlement rates for older accident years have continued to increase significantly. Changes in the rates that claims settle are generally a leading indicator of changes in paid loss development patterns and, if no adjustment for changes in claim settlement rates is made, paid loss development may be distorted.
4. Mix of Claims by Injury Type. Exhibit 4 shows the mix of claims by type of injury from accident year 2001 through accident year 2018 (which is based on preliminary data). The shares of medical-only claims increased in 2017 which may be related to efforts to improve employer reporting of smaller first-aid claims. The distribution of indemnity claims among those involving permanent disability and those involving only temporary disability has been relatively stable over the last several years. This suggests that recent loss development patterns are not being significantly impacted by shifts in the mix of indemnity injury types.
5. Quarterly Loss Development. Exhibits 5.1 through 5.4 show accident year loss development by quarter.³ As shown in Exhibits 5.1 and 5.2, quarterly incurred factors generally declined over the most recent calendar year but more modestly than in the recent past. As shown in Exhibits 5.3 and 5.4, quarterly paid indemnity and medical loss development over the last year have also generally declined at a more modest rate compared to recent prior evaluations. Declines in loss development over the last several years are largely attributable to provisions of SB 863 impacting medical costs, the lien reforms of SB 1160 and AB 1244, increased efforts to fight workers' compensation provider fraud, reductions in pharmaceutical costs, and increases in indemnity claim settlement rates. As discussed in detail below, the WCIRB recommends several adjustments to paid loss development for these factors which significantly reduces the impact of these phenomena on projected payment patterns.

Selected Loss Development Methodologies

Based in part on a review of the diagnostic indicators discussed above, the WCIRB has developed ultimate losses for historical accident years to project the January 1, 2021 to August 31, 2021 loss ratio as follows:

² The amounts shown in Exhibits 2.3 and 2.4 for accident years 2010 and 2011 reflect only the amount of MCCC costs that were reported as medical losses for those years and as a result are not comparable to either each other or the amounts reported for other years.

³ The medical loss development factors shown in Exhibits 5.2 and 5.4 for accident years 2012 and later exclude MCCC costs. The factors shown for accident years 2011 and prior include MCCC costs.

Indemnity Loss Development from 15 Months to 75 Months

As discussed above, the WCIRB continues to believe that historical paid development is a more appropriate basis for projecting future indemnity loss development for these development periods than historical incurred loss development. Section B, Exhibits 2.4.1 and 2.4.2 show the historical annual accident year paid indemnity loss development factors evaluated at successive March 31 evaluations.

As discussed above, over the last few years, there has been a steady increase in the rate at which indemnity claims are settling. Some of the factors contributing to this increase are (a) a greater focus on settling of older, larger claims, (b) reduction in the number of claims remaining open to resolve outstanding liens as a result of SB 863, SB 1160 and AB 1244 provisions impacting lien filings, (c) anti-fraud efforts directed at provider fraud, (d) reduced opioid usage, and (e) other provisions of SB 863 such as independent medical review (IMR) and independent bill review (IBR) speeding up the medical treatment of injured workers. Other system diagnostics suggest the speed-up in claim settlement rates is greatest on permanent disability claims and is generally being experienced throughout the entire state.⁴ As shown in Exhibit 3, although the increases in claim settlement rates have moderated for the most recent two accident years (2018 and 2019), they continue to grow for older years.

In 2017, the WCIRB studied the impact of changes in claim settlement rates on paid loss development patterns.⁵ The WCIRB's study found that, during periods of significant claim settlement rate change, an adjustment to paid loss development based on the Berquist-Sherman approach⁶ generally increased the accuracy of the projection. The WCIRB's 2017 study also included a test of the primary assumptions of the Berquist-Sherman method applied to workers' compensation data and found that the assumptions applied in the WCIRB's approach were reasonable.

Given the continued increases in the rate of claim settlement, the WCIRB recommends basing indemnity loss development through 75 months on paid indemnity development adjusted for changing settlement rates based on the Berquist-Sherman approach. Under this approach, (a) settlement ratios are adjusted to a common level, (b) paid severities on both open and closed claims are adjusted to a level that reflects the adjusted settlement rates for the accident year at the specified evaluation, (c) paid losses on open and closed claims are restated based on the restated closed claims and restated paid severities, and (d) adjusted paid development factors are recomputed at a common settlement rate. This methodology is consistent with the approach reflected in the last several pure premium rate filings.

Section B, Exhibits 2.5.3 through 2.5.8 show the computation of projected indemnity loss development from 15 months through 75 months adjusted for the impact of changing claim settlement rates. The WCIRB has projected indemnity loss development for this period based on the latest year paid age-to-age indemnity development factor adjusted on this basis as shown in Section B, Exhibit 2.5.1 and column 2 of Section B, Exhibit 3.1.

Indemnity Loss Development from 75 Months to 111 Months

In the WCIRB's 2017 study of the method to adjust paid loss development for changes in claim settlement rates, the WCIRB reviewed the applicability of this adjustment to more mature periods given that indemnity claim settlement rates have also increased during these periods. The WCIRB found that increases in claim settlement rates for older periods are generally not as significant as increases in less mature periods since significantly fewer claims are open during these periods, and the Berquist-Sherman adjustment for changes to claim settlement rates applied to these periods was not significantly improving the accuracy of the projection. As a result, the WCIRB projects future indemnity development from 75 months through 111 months based on the latest year paid age-to-age indemnity development factor. The

⁴ See Exhibit M5 of Item AC20-08-01 of the August 4, 2020 WCIRB Actuarial Committee Agenda.

⁵ See Item AC17-03-03 of the March 21, 2017 WCIRB Actuarial Committee Agenda.

⁶ Berquist, James R., and Sherman, Richard E., "Loss Reserve Adequacy Testing: A Comprehensive, Systematic Approach," *Proceedings of the Casualty Actuarial Society*, PCAS, Volume LXIV, 1977, p.123.

age-to-age indemnity development factors projected on this basis are shown in Section B, Exhibit 2.5.1 and column 2 of Section B, Exhibit 3.1.

Indemnity Loss Development from 111 Months to 267 Months

A 2012 study of longer-term loss development performed by the WCIRB indicated that due to significant random variability in age-to-age development for more mature periods, a longer-term average of paid development factors can increase the stability of the projections.⁷ Therefore, the WCIRB has for a number of years projected paid indemnity development from 111 months to 267 months based on the average of the three most recent years' age-to-age paid indemnity loss development factors. The age-to-age indemnity development factors projected on this basis are shown in Section B, Exhibit 2.5.1 and column 2 of Section B, Exhibit 3.1.

Indemnity Loss Development from 267 Months to 423 Months

In prior pure premium rate filings, the WCIRB utilized incurred development corresponding to accident years 1997 and prior (267 months and later). This methodology was based on a 2014 WCIRB study of paid and incurred loss development patterns which found that a significant shift in the ratio of incurred losses to paid losses in the mid-1990s, particularly for the medical component, was distorting paid loss development patterns. However, a WCIRB retrospective study of late-term loss development conducted earlier this year showed that paid loss development after 267 months was significantly more accurate at projecting recent emerging loss development patterns for 267 months and later when compared to incurred loss development.⁸ In addition, the WCIRB's study showed that the loss development tail factor computed based on paid loss development was significantly more stable over the last several years compared to that based on incurred loss development.⁹ As a result, the WCIRB applied paid indemnity loss development after 267 months in this filing.

The recent acceleration in claim settlement rates also likely impacts later period loss development as fewer claims being open in more mature periods for a particular accident year compared to prior years at the same maturity should lead to fewer future payments on that accident year being made. The WCIRB's recent study of longer-term loss development showed that there is a strong correlation between changes in the proportion of ultimate claims open at a point in time and changes in later period loss development.¹⁰ The study also showed that the correlation between these two measures was stronger when the difference between the accident years underlying the historical age-to-age factors and the accident year to be developed is greater. For example, to project accident year 2019 from 267 to 279 months, age-to-age development data from accident years 1997 and prior are used (22+ year difference). If no adjustment to loss development is made, paid loss development utilized from these older accident years with a larger share of open claims will likely overstate the expected payments to emerge on more recent accident years where claim settlement rates have increased and relatively fewer claims are open. As a result, the WCIRB recommends adjusting paid loss development applied after 267 months for the recent changes in claim settlement rates impacting later period development.

Section B, Exhibits 2.5.9 through 2.5.12 show the adjustment applied to paid indemnity development from 267 months through 375 months for accident years 2018 and 2019. Item 1 of Section B, Exhibit 2.5.9 shows reported closed indemnity claim counts based on WCIRB aggregate financial data. Item 2 of Section B, Exhibit 2.5.9 shows projected ultimate indemnity claim counts based on the latest year indemnity claim count development factors (see Section B, Exhibit 2.5.3). Item 3 of Section B, Exhibit 2.5.9 shows projected ultimate indemnity claim settlement ratios based on Items 1 and 2. Item 4 of Section B, Exhibit 2.5.10 shows incremental indemnity claim disposal rates, which is equal to (a) the difference in the ultimate indemnity claim settlement ratio from the prior evaluation divided by (b) 1.0 minus the indemnity claim settlement ratio from the prior evaluation from Item 3 of Section B, Exhibit 2.5.9. This represents the rate of incremental claim closure compared to the total estimated (reported and

⁷ See Item AC11-12-04 of the March 20, 2012 WCIRB Actuarial Committee Agenda.

⁸ See Item AC19-08-05 of the March 16, 2020 WCIRB Actuarial Committee Agenda.

⁹ See Item AC19-08-05 of the August 1, 2019 WCIRB Actuarial Committee Agenda.

¹⁰ See Item AC19-08-05 of the August 4, 2020 WCIRB Actuarial Committee Agenda.

not yet reported) number of open indemnity claims at the prior evaluation. A three-year average of this disposal rate is selected to compute the rate of open claims compared to prior open claims (i.e., 1.0 minus the selected disposal rate) to mitigate volatility in this adjustment.

Item 5 of Section B, Exhibit 2.5.10 shows the projected number of open indemnity claims. The first (italicized) figure shown for each historical accident year is based on reported indemnity claim count information while the remaining figures are based on the latest reported claim counts and the projected open claim rate computed in Item 4. Item 6 of Section B, Exhibit 2.5.11 shows the projected ratio of open indemnity claims to ultimate indemnity claims based on Item 5 of Section B, Exhibit 2.5.11 and Item 2 of Section B, Exhibit 2.5.9. The three (italicized) figures shown for each historical accident year are based on reported data while the remaining figures are projections. A three-year average of this ratio is selected to form the basis from which more recent accident years will compare.

Item 7 of Section B, Exhibit 2.5.11 shows the comparison of the projected ratio of open claims to the selected historical ratio of open claims based on Item 6. As shown for accident years 2018 and 2019, the ratio of open claims is projected to be significantly lower for these years compared to the historical data from which age-to-age development for each of these maturities is projected. Item 8 of Section B, Exhibit 2.5.12 shows the three-year average paid indemnity and medical age-to-age factors prior to the adjustment which is based on Section B, Exhibits 2.3.2 and 2.4.2. Item 9 of Section B, Exhibit 2.5.12 shows the selected adjustment to paid loss development for the impact of claim settlement rate changes, which is based on Item 7 of Section B, Exhibit 2.5.11. The selected adjustment factors to loss development are tempered to 40% of the actual change as the WCIRB found that only approximately 40% of the change in the proportion of open claims was predictive of the change in future paid development in the WCIRB's recent loss development study.¹¹ Item 10 of Section B, Exhibit 2.5.12 shows the paid indemnity and medical age-to-age development factors for accident years 2018 and 2019 adjusted for the impact of claim settlement rate changes, which is based on Item 9 multiplied by the development portion (i.e., the age-to-age factor minus 1.0) of the factors in Item 8.

Indemnity claim count information needed to compute the adjustment shown in Section B, Exhibits 2.5.9 through 2.5.12 are only available through 375 months. To project indemnity development from 375 months through 423 months, the WCIRB applied this adjustment using the average projected-to-actual ratio of open claims for the 351-, 363-, and 375-month periods (Item 7 of Section B, Exhibit 2.5.11) for the 387-, 399-, and 411-month periods. The age-to-age indemnity development factors projected on this basis from 267 months through 423 months are shown in Section B, Exhibit 2.5.2 and column 2 of Section B, Exhibit 3.1.

Indemnity Loss Development after 423 Months

Workers' compensation losses continue to show significant development beyond 423 months. The WCIRB uses an inverse power curve fitting approach to project the indemnity loss development beyond 423 months. The WCIRB has found that this approach to compute the loss development tail compared to other methods (a) significantly improves the stability of the loss development tail while not significantly impacting its accuracy, (b) utilizes more complete data based on cumulative development from more recent years as opposed to incremental development from much later periods, and (c) does not require additional adjustments applied by the WCIRB as in other approaches.¹²

The WCIRB's most recent study of later-period loss development showed that a tail factor based on the inverse power curve fit to a four-year average of paid loss development was the most stable of the alternative methods reviewed.¹³ The WCIRB also believes that the tail development factor should be derived based on the indemnity paid age-to-age factors with the adjustments for the impact of changes in claim settlement rates on latter period development as discussed above as tail development is likely also impacted by this phenomenon. Specifically, the WCIRB projected paid indemnity loss development after

¹² See Item AC16-03-03 of the April 5, 2016 WCIRB Actuarial Committee Agenda.

¹³ See Item AC19-08-05 of the August 1, 2019 WCIRB Actuarial Committee Agenda.

423 months based on (a) fitting an inverse power curve to a four-year average of the 111-to-123 through 339-to-351 months paid indemnity age-to-age factors adjusted for changes in claim settlement rates based on the approach discussed above, (b) extrapolating the fitted factors to 80 development years, and (c) taking the cumulative product of the extrapolated factors after 423 months. The projected indemnity tail development factor computed on this basis is shown in Section B, Exhibit 2.5.2.

Medical Loss Development from 15 Months to 75 Months

As with indemnity losses, for many years, the WCIRB has been relying on historical paid medical loss development to project ultimate medical losses for these evaluation periods. Section B, Exhibits 2.4.1 and 2.4.2 show the historical annual accident year paid medical loss development factors evaluated at successive March 31 evaluations.

SB 1160 and AB 1244, which became effective in 2017, included a number of provisions related to liens and have reduced the number of lien filings by approximately 60% below the average level of filings shortly before the reforms. A 2018 WCIRB study showed that liens historically represented a significant proportion of paid medical loss development, particularly at mid-maturities. As a result, the age-to-age development factors shown in Exhibits 2.6.1 and 2.6.2 for these periods include payments from liens in significantly greater volumes than are expected to emerge for more recent accident year claims. The WCIRB believes relying on the paid medical development from these periods without adjusting for the reductions in future lien filings will overstate the loss development projection. The WCIRB has adjusted the cumulative loss development factors projected for 2014 to 2017 to reflect the estimated impact of the SB 1160 and AB 1244 lien-related provisions. These adjustments, which are shown by accident year in Table 1, were based on a review of medical development with and without any lien payments using the WCIRB's medical transaction data and assuming 60% weight given to the projected medical development with no lien payments (to represent the 60% estimated reduction in lien filings) and 40% weight given to the projected medical development with lien payments.¹⁴ For development prior to 39 months, the projected cumulative loss development factor is based on the adjusted factor projected for 2017 at 39 months and the age-to-age development emerging on a post-SB 1160 and AB 1244 basis for 2017 and later. This approach is consistent with that reflected in the last several pure premium rate filings.

Table 1: Adjustment to Cumulative Paid Medical Development for SB 1160 & AB 1244 Lien Reforms

Accident Year	Age at 3/31/2020	Adjustment to Reflect 60% Reduction in Lien Filings
2014	75	-0.7%
2015	63	-1.5%
2016	51	-2.5%
2017	39	-3.7%

Many of the provisions of SB 1160 and AB 1244 also affected liens that had already been filed prior to the effective date of SB 1160 and AB 1244. In particular, SB 1160 provided that all outstanding liens filed after January 1, 2013 must have a declaration under penalty of perjury filed with the Division of Workers' Compensation (DWC) by July 1, 2017 stating that the lien is not subject to IMR or IBR and that it satisfies one of a number of other criteria. In July 2017, the DWC dismissed approximately 292,000 liens for which no declarations had been filed. The WCIRB's 2018 study also analyzed the potential impact of the DWC lien dismissals on medical loss development patterns and found that the dismissed liens will likely have a significant impact on paid medical development emerging after July 2017. If no adjustment to loss development is made, paid medical development emerging in the third quarter of 2017 and later may be distorted as the numerator of the age-to-age paid medical development factor will contain a different

¹⁴ See Item AC18-03-03 of the March 19, 2018 and March 18, 2019 WCIRB Actuarial Committee Agendas for more information on this adjustment.

volume of lien payments than the denominator. In order to correct for this potential distortion, the WCIRB adjusted medical payments prior to July 1, 2017 to reflect the impact of the DWC lien dismissals. Table 2 shows the adjustments made by accident year based on the WCIRB's study of their potential impact using lien information provided by the DWC. Given that the lien dismissals are only expected to significantly impact paid medical development through mid-term development periods for which lien payments are most significant, the WCIRB is applying these adjustments only to development emerging on accident years 2011 to 2016.¹⁵ This approach is consistent with that reflected in the last several pure premium rate filings.

Table 2: Adjustment for DWC Lien Dismissals to Paid Medical Development

Accident Year	Age-to-Age Factor for 3/31/2019	Adjustment to Pre-July 1, 2017 Payments
2011	87-to-99	-3.6%
2012	75-to-87	-3.8%
2013	63-to-75	-3.4%
2014	51-to-63	-2.4%
2015	39-to-51	-0.9%
2016	27-to-39	-0.1%

Since 2013, pharmaceutical costs have decreased significantly. The recent decreases in pharmaceutical costs have been attributed to a number of factors including implementation of IMR and IBR as a result of SB 863, reductions in the number of spinal surgeries, reaction to the national opioid epidemic, anti-fraud efforts, changes in pharmaceutical reimbursement rates from the Medi-Cal based fee schedule, and the new drug formulary adopted by the DWC effective January 1, 2018. A 2019 WCIRB study of the impact of the recent pharmaceutical cost declines on paid medical loss development showed that pharmaceutical costs represent a much larger proportion of later period development compared to earlier periods.¹⁶ If no adjustment to loss development is made, more recent paid medical development emerging for older accident years may be distorted as the numerator of the age-to-age paid medical development factor will contain a much smaller volume of pharmaceutical payments than the denominator.

The WCIRB is correcting this potential distortion in the projected medical age-to-age factors using an approach that is detailed on Exhibits 6.1 and 6.2 and is consistent with that reflected in the January 1, 2020 Pure Premium Rate Filing. Exhibit 6.1 shows, for calendar years 2013 through 2018, the distribution of pharmaceutical payments by maturity level and calendar year, and the difference in those shares by maturity from the calendar year 2018 level based on WCIRB medical transaction data. In adjusting paid medical loss development, the WCIRB assumed 2018 as the baseline level and adjusted calendar year 2013 through 2017 medical payments based on the difference between (a) the pharmaceutical share of medical service payments for that calendar year and (b) the pharmaceutical share for calendar year 2018 at the same maturity. As shown in Exhibit 6.1, the differences in the pharmaceutical share from 2018 increase gradually by maturity up through approximately 96 months. After 96 months, the differences are somewhat volatile in large part due to the relative sparsity of payments at these maturities. As a result, the WCIRB based the adjustment after 96 months on the cumulative difference for all maturities older than 96 months.

The process shown in Exhibit 6.1 and described above contemplates calendar years 2013 and forward—periods for which the WCIRB has collected medical transaction data. To adjust payments made in calendar years 2012 and prior, the WCIRB assumed the 2013 pharmaceutical payment pattern approximated that for the earlier calendar years. Exhibit 6.2 shows the adjustment for earlier calendar years based on comparing the cumulative proportion of pharmaceutical costs for calendar year 2013 with that for calendar year 2018 at the same maturity.

¹⁵ See Item AC18-03-03 of the March 19, 2018 WCIRB Actuarial Committee Agenda for more information on this adjustment.

¹⁶ See Item AC19-06-03 of the June 14, 2019 WCIRB Actuarial Committee Agenda.

The adjusted paid medical age-to-age factors are computed by adjusting pre-2018 medical payments to the 2018 pharmaceutical cost level by calendar year and development period based on the information shown in Exhibits 6.1 and 6.2. Once adjusted, the paid medical age-to-age factors are recomputed on an adjusted basis. The paid medical age-to-age factors adjusted on this basis are shown in Section B, Exhibits 2.4.1, 2.4.2, and 2.6.1.

Changes in claim settlement rates can also significantly affect paid medical loss development. As discussed above, indemnity claim settlement rates have increased steadily over the last several years. As with indemnity loss development, the WCIRB believes an adjustment to paid medical loss development for the recent increase in claim settlement rates is appropriate. Section B, Exhibits 2.6.3 through 2.6.8 show the adjustment to medical paid loss development for changing claim settlement rates. The methodology used for medical paid development is analogous to that for indemnity, which involves adjustments to both open and closed claims, and is applied to the age-to-age paid medical loss development factors adjusted as described above.

The WCIRB's selected age-to-age and cumulative paid medical development factors for development through 75 months, which have been adjusted for the impact of SB 1160 and AB 1244 provisions impacting medical losses, the recent decreases in pharmaceutical costs, and changes in claim settlement rates, are shown in Section B, Exhibit 2.6.1 and column 3 of Section B, Exhibit 3.2. The WCIRB projects medical loss development from 15 months to 75 months using the latest year age-to-age paid medical loss development factor adjusted for the factors described above.

Medical Loss Development from 75 Months to 111 Months

The WCIRB projects future medical development from 75 months through 111 months based on the latest year paid age-to-age medical development factor with adjustments for the impact of SB 1160 and AB 1244 and decreases in pharmaceutical costs described above. The age-to-age medical development factors projected on this basis are shown in Section B, Exhibit 2.6.1 and column 3 of Section B, Exhibit 3.2.

Medical Loss Development from 111 Months to 267 Months

As with indemnity, a 2011 WCIRB study indicated that a longer-term average of paid development factors can increase the stability of paid medical loss projections for more mature periods.¹⁷ Therefore, the WCIRB has projected paid medical development from 111 months to 267 months using the average of the three most recent years' age-to-age paid medical loss development factors adjusted for the impact of decreases in pharmaceutical costs described above.

Medical Loss Development from 267 Months to 423 Months

As discussed above, the WCIRB recently studied loss development in these later periods and found that paid development was generally a better predictor of recent emerging loss development patterns than incurred development. As also discussed above for indemnity development, the recent acceleration in claim settlement rates also likely impacts later period loss development and, in particular, for medical losses which have significantly more payments in later periods compared to indemnity. The WCIRB adjusted paid medical loss development applied after 267 months for recent changes in claim settlement rates impacting longer-term loss development using an approach similar to that applied for indemnity. Section B, Exhibits 2.5.9 through 2.5.12 show the computation of this adjustment applied to paid medical development (including the adjustment for the decreases in pharmaceutical costs), the results of which are also shown in Section B, Exhibit 2.6.2 and column 3 of Section B, Exhibit 3.2 from 267 months to 423 months.

¹⁷ See Item AC11-12-04 of the December 1, 2011 WCIRB Actuarial Committee Agenda.

Medical Loss Development after 423 Months

As with indemnity loss development, the WCIRB recommends using the inverse power curve fitting approach to project the medical loss development tail. Specifically, the WCIRB recommends projecting paid medical loss development after 423 months based on (a) fitting an inverse power curve to a four-year average of the 111-to-123 through 339-to-351 months paid medical age-to-age factors adjusted for the decreases in pharmaceutical costs and the impact of claim settlement rate changes on later period development, (b) extrapolating the fitted factors to 80 development years, and (c) taking the cumulative product of the extrapolated factors after 423 months. The projected medical tail development factor computed on this basis is shown in Section B, Exhibit 2.6.2.

Estimated Ultimate Loss Ratios

The age-to-age development factors selected for each evaluation period are combined in Section B, Exhibits 3.1 (for indemnity) and 3.2 (for medical) to produce a cumulative development factor for each period. These factors reflect the ultimate amount of losses anticipated for each accident year relative to the reported paid losses evaluated as of March 31, 2020. These cumulative factors are then applied to the reported (undeveloped) paid indemnity and adjusted paid medical loss ratios as of March 31, 2020 to project an ultimate loss ratio for each accident year.¹⁸ (The adjusted paid and adjusted developed medical loss ratios shown in columns 2 and 5 of Section B, Exhibit 3.2 have been adjusted for the decreases in pharmaceutical costs to be on a comparable basis with the adjusted medical loss development factors described above. These ratios are for the sole purpose of computing the indicated January 1, 2021 pure premium rate level and, as a result, do not reflect the actual WCIRB estimates of ultimate medical loss ratios for those accident years. Column 6 of Section B, Exhibit 3.2 shows, for informational purposes, the estimated ultimate medical loss ratio for each accident year.)

Summary of Alternative Loss Development Projections

As discussed above, the WCIRB is projecting future loss development primarily based on historical latest year paid development adjusted for SB 1160 and AB 1244, recent pharmaceutical cost declines, and changes in claim settlement rates. For informational purposes, the WCIRB has computed alternative loss projections based on a number of alternative loss development projection methodologies that reflect underlying assumptions that differ from those reflected in the WCIRB's recommended loss development methodology. These alternative loss development projections are shown in Exhibits 7 through 17 and are discussed below.

Alternative Incurred Loss Development Projections¹⁹Three-Year Average/Latest Year (Unadjusted) Incurred Loss Development

Exhibits 7.1 through 7.3 (average of the latest 3 years' factors) and 8.1 through 8.3 (latest year factor) reflect projected future loss development patterns based on historical unadjusted incurred development methodologies. Incurred methodologies are not impacted by changing payment and settlement patterns to the same extent as are paid projections. Also, since the reported incurred amounts far exceed reported paid amounts for relatively immature accident year loss evaluations, incurred loss development is not as highly leveraged for the less mature accident years. However, incurred loss development can be distorted by changes in case reserve levels, can be significantly impacted by legislative or regulatory changes, judicial action, or changes in the definition of losses (e.g., the change in reporting requirements related to MCCP costs), shows greater variability across insurers than paid loss development, and can be significantly more volatile and cyclical than paid loss development. Furthermore, in retrospective analyses, unadjusted incurred loss development projections have generally been less accurate and less stable than the corresponding paid loss development projections.

¹⁸ Medical loss ratios shown in Section B, Exhibit 3.2 for accident years 2011 and subsequent do not reflect MCCP costs. Ratios shown for accident years 2010 and prior do reflect MCCP costs.

¹⁹ All incurred loss development methodologies reflect a six-year average of incurred loss development applied after 111 months.

The loss ratios projected under both unadjusted incurred loss development methodologies are below those based on the corresponding paid loss development methodologies. As discussed above, the WCIRB believes paid development to be a more stable and reliable basis to project future development than incurred development. In addition, given the potential impact of SB 1160 and AB 1244, recent pharmaceutical cost declines, and the acceleration in claim settlement on medical loss development, the WCIRB believes that some adjustment for the impact of these changes is appropriate. However, adjustments made to paid development cannot easily be applied to incurred loss development as the specific impact of shifts in development patterns on case reserve estimates and incurred patterns is less well-defined.

Three-Year Average Incurred Loss Development Adjusted for Changes in Average Case Reserve Levels

Incurred loss development projections can be distorted by changes in average case reserve levels. For a number of years, the WCIRB has included as an alternative loss development projection the results of a standard actuarial methodology which adjusts historical incurred loss development factors to a common case reserve adequacy level in computing future loss development. In 2018, the WCIRB reviewed the assumptions and approach to this methodology and developed several refinements to the traditional actuarial approach.²⁰ The WCIRB also found that although the method that adjusts incurred development to a common case reserve level should address shifts in average case reserves, it does not address the inherent volatility that has been observed in incurred loss development patterns. As a result, to mitigate this volatility, the WCIRB based this projection on the average of the three most recent age-to-age factors rather than the latest year's factor.

Exhibits 9.1 through 9.11 reflect projected future incurred loss development with adjustments to an estimated common average case reserve level based on the average of the latest three years' factors. Projections based on this methodology are generally consistent with the unadjusted incurred projections. As discussed above, recent average case reserve levels have continued to decline for more mature periods but have moderated for less mature periods, somewhat neutralizing the impact of this adjustment.

Latest Year Incurred Adjusted for Changes in Insurer Mix

Different insurers may have different claim reserving practices and different incurred loss development patterns. As a result, shifts in market share among insurers can impact statewide incurred loss development projections. In cases in which there is clear evidence of shifting market shares impacting incurred loss development projections, an adjustment for changes in insurer mix may be appropriate. However, applying separate projections to individual insurers in an insurer mix adjustment raises several concerns including: (a) a loss of transparency in the WCIRB's projections of ultimate losses on an insurer mix-adjusted basis, (b) the appropriateness of applying a statewide methodology to individual insurer experience, and (c) the appropriateness of applying current year weights to older years given that significant market share shifts may change the nature of an insurer's book of business.

Exhibits 10.1 through 10.3 show incurred loss development projections in which the market shares of State Compensation Insurance Fund (State Fund) and private insurers collectively have been held constant for all years in the analysis. Projections based on the latest development factor for this methodology are somewhat below the latest year incurred projection with no adjustment for changing insurer mix. The WCIRB does not recommend using this methodology unless there is clear evidence of shifts in insurer market shares significantly affecting incurred loss development patterns due to the concerns discussed above.

²⁰ See Item AC18-08-04 of the August 1, 2018 WCIRB Actuarial Committee Agenda.

Alternative Paid Loss Development Projections²¹Three-Year Average/Latest Year (Unadjusted) Paid Loss Development

Paid projections are not dependent on case reserves and show less variability across insurers than incurred projections do. In addition, unadjusted paid projections have generally over the long term shown to be more accurate and stable than the corresponding incurred projections in retrospective analyses. However, paid projections can be impacted by changing claim settlement and payment patterns and inasmuch as a relatively small percentage of an accident year's ultimate losses are paid at early maturity levels, paid development projections for immature accident years are highly leveraged.

Exhibits 11.1 through 11.3 (average of the latest three years' factors) and 12.1 through 12.3 (latest year factor) project future loss development based on historical unadjusted paid loss development. The projections using this methodology are somewhat higher than projections using the WCIRB's selected methodology. As discussed, unadjusted paid projections can be significantly distorted by legislative changes, shifts in the mix of medical services, and changes in claim settlement rates. Given the potential impact of SB 1160 and AB 1244, recent declines in pharmaceutical costs, and recent increases in indemnity claim settlement rates on medical loss development patterns, the WCIRB believes it is appropriate to adjust for these factors.

Latest Year Paid Loss Development Adjusted for Reforms

Exhibits 13.1 and 13.2 reflect the latest year paid medical projections after adjustment for the impact of SB 1160 and AB 1244 lien filing related provisions and recent declines in pharmaceutical costs but with no adjustment for changes in claim settlement rates through 75 months. The projection produced by this methodology is somewhat higher than that recommended by the WCIRB. However, as discussed above, paid loss development can be significantly distorted when claim settlement rates are changing and the WCIRB believes the adjustment for changes in claim settlement rates based on the Berquist-Sherman approach is appropriate.

Three-Year Average Paid Loss Development Adjusted for Changes in Claim Settlement Rates and Reforms

As discussed above, the recent increases in claim settlement rates can significantly impact paid loss development patterns. However, adjustments for changes in claim settlement rates can be volatile depending on the underlying data and the treatment of partial payments inherent in workers' compensation claims.

Exhibits 14.1 through 14.3 reflect projected future paid loss development with adjustments to an estimated common claim settlement rate through 75 months as well as the adjustments for SB 1160 and AB 1244 and recent pharmaceutical cost declines recommended by the WCIRB for paid medical using the average of the latest three years' factors. The projection based on this methodology is somewhat higher than that based on the WCIRB's selected method which is based on the latest year factor. Given the continuing increase in indemnity claim settlement rates, the WCIRB recommends use of latest year factors to be responsive to the most recent trends.

Latest Year Paid Loss Development Adjusted for Changes in Claim Settlement Rates and Reforms with Incurred Development Applied after 267 Months

Exhibits 15.1 through 15.3 reflect projections based on the latest year paid methodology including adjustments for the impact of SB 1160 and AB 1244, recent declines in pharmaceutical costs, and changes in claim settlement rates but using incurred development after 267 months (the methodology reflected in the January 1, 2020 Pure Premium Rate Filing). The projection produced by this methodology is slightly higher than that based on the WCIRB's selected methodology. Based on the

²¹ All paid loss development methodologies reflect a three-year average of paid loss development applied after 111 months and adjustments for the impact of changes in claim settlement rates on later period development applied after 267 months.

2020 WCIRB study discussed above, the WCIRB believes that paid development with adjustments for changes in claim settlement rates is a more accurate predictor of emerging development after 267 months compared to incurred development. In addition, recent later-period age-to-age incurred development, particularly for medical, has shown an anomalous pattern with many factors below 1.0. Finally, as discussed above, it is much more challenging to adjust incurred development for shifts in development patterns such as the recent sharp declines in pharmaceutical costs.

Latest Year Paid Loss Development Adjusted for Changes in Insurer Mix

Significant shifts in market share among insurers can affect statewide paid loss development projections, suggesting an adjustment for changes in insurer mix may be appropriate when there are significant market share shifts. However, applying separate projections to individual insurers in an insurer mix adjustment raises several concerns as discussed above with respect to incurred development.

Exhibits 16.1 through 16.3 show paid loss development projections in which the market shares of State Fund and private insurers collectively have been held constant for all years in the analysis. The paid projections based on the latest development factor for this methodology are somewhat below the latest year paid projection with no adjustment for changing insurer mix. The WCIRB does not recommend using this methodology unless there is clear evidence of shifts in insurer market shares significantly affecting paid loss development patterns due to the concerns discussed above with respect to the insurer mix adjustment applied to incurred loss development.

Paid Loss Development Based on an Expected Loss Ratio with a Bornheutter-Ferguson Adjustment

All of the loss development methodologies previously discussed rely on paid or incurred age-to-age (chain ladder) development factors. Loss development projections based on chain ladder development can be highly leveraged, particularly at earlier maturities. Alternatively, future development for an accident year can be computed based on an expected loss ratio for that year and the reported loss ratio that has emerged to date. A Bornheutter-Ferguson (BF) adjustment assigns some weight to this projection based on the cumulative chain ladder loss development factor with the remaining weight assigned to the traditional chain ladder loss development projection. This approach can be less highly leveraged at less mature evaluation periods since the expected loss ratio can be initially based on more mature accident years. Also, projecting an expected loss ratio for the projection year may require additional assumptions such as appropriate on-level and trend adjustments.

Exhibits 17.1 through 17.5 show projections based on an expected loss ratio approach with a BF adjustment based on paid losses through 27 months with latest year paid development adjusted for the impact of SB 1160 and AB 1244, recent pharmaceutical cost declines (for medical), and changes in claim settlement rates applied after 27 months. Projections based on this methodology are generally consistent with the projections based on the chain ladder methodology recommended by the WCIRB. This methodology adds significant complexity and requires additional assumptions as discussed above. In addition, a WCIRB retrospective analysis of the BF-adjusted method conducted in 2016 showed that the chain ladder methods were generally more accurate than the BF-adjusted method over the long term.²²

The projected loss ratios for January 1, 2021 to August 31, 2021 policies derived based on the loss development methodology selected by the WCIRB as well as each of the alternative loss development methodologies described above are shown in Table 3.

²² See Item AC16-03-03 of the April 5, 2016 WCIRB Actuarial Committee Agenda.

Table 3: Projected Loss Ratios for January 1, 2021 to August 31, 2021 Policies

January 1, 2021 Filing Loss Development Methodology	Indemnity Loss Ratio	Medical Loss Ratio	Total Loss Ratio
Latest Year Paid Adjusted for SB 1160, Recent Pharmaceutical Cost Declines, and Changes in Claim Settlement Rates	0.278	0.340	0.618

Alternative Loss Development Methodologies ²³	Indemnity Loss Ratio	Medical Loss Ratio	Total Loss Ratio
<u>Incurred Loss Development Methodologies</u>			
Three-Year Average (Unadjusted)	0.287	0.308	0.595
Latest Year (Unadjusted)	0.277	0.301	0.578
Three-Year Average Adjusted for Changes in Case Reserve Levels	0.277	0.306	0.583
Latest Year Adjusted for Changes in Insurer Mix	0.275	0.294	0.569
<u>Paid Loss Development Methodologies</u>			
Three-Year Average (Unadjusted)	0.304	0.368	0.672
Latest Year (Unadjusted)	0.287	0.351	0.638
Latest Year Adjusted for SB 1160 and Recent Pharmaceutical Cost Declines	—	0.349	—
Three-Year Average Adjusted for SB 1160, Recent Pharmaceutical Cost Declines, and Changes in Claim Settlement Rates	0.284	0.353	0.637
Latest Year Adjusted for SB 1160, Recent Pharmaceutical Cost Declines, and Changes in Claim Settlement Rates with Long-Term Incurred Development	0.282	0.341	0.623
Latest Year Adjusted for Changes in Insurer Mix	0.284	0.340	0.624
BF Paid to 27 Months; WCIRB Selected Method after 27 Months	0.275	0.341	0.616

²³ All incurred loss development methodologies reflect a six-year average of incurred loss development applied after 111 months. All paid loss development methodologies reflect a three-year average of paid loss development applied after 111 months and adjustments for the impact of changes in claim settlement rates on later period development applied after 267 months as in the WCIRB's recommended methodology, unless otherwise noted.

Ratios of Paid to Incurred Losses - Indemnity

Accident	Evaluated as of (in months):																		
Year	3	15	27	39	51	63	75	87	99	111	123	135	147	159	171	183	195	207	219
1980										94.2%	95.2%	95.9%	96.6%	97.0%	97.1%	97.4%	97.6%	97.9%	98.1%
1981									92.8%	94.6%	95.4%	96.3%	97.0%	97.7%	98.0%	98.3%	98.4%	98.7%	98.7%
1982								90.8%	93.3%	94.8%	95.8%	96.5%	97.0%	97.6%	98.0%	98.1%	98.2%	98.3%	98.3%
1983							88.0%	91.7%	94.2%	95.8%	96.7%	97.3%	97.7%	98.2%	98.3%	98.6%	98.6%	98.8%	98.8%
1984						83.7%	88.9%	92.8%	95.0%	95.8%	97.0%	97.6%	98.0%	98.3%	98.6%	98.8%	98.9%	99.0%	99.0%
1985					75.2%	83.8%	89.4%	92.9%	95.0%	96.2%	96.9%	97.5%	97.9%	98.3%	98.7%	98.8%	98.9%	99.0%	99.1%
1986				60.4%	74.4%	83.5%	89.9%	92.9%	94.8%	96.1%	97.0%	97.5%	98.2%	98.3%	98.6%	98.7%	98.9%	98.9%	99.0%
1987			38.6%	59.7%	74.7%	84.6%	89.6%	93.1%	95.0%	96.3%	97.1%	96.7%	98.1%	98.3%	98.4%	98.6%	98.7%	98.7%	98.9%
1988		19.6%	37.9%	59.9%	76.0%	84.8%	90.2%	93.5%	95.5%	96.7%	97.5%	98.1%	98.2%	98.3%	98.4%	98.7%	98.8%	98.9%	98.9%
1989	7.3%	18.2%	37.4%	61.7%	76.3%	85.7%	90.9%	93.9%	95.7%	96.6%	97.5%	97.8%	97.9%	98.1%	98.2%	98.2%	98.3%	98.6%	98.6%
1990	7.6%	21.1%	42.8%	64.4%	79.5%	87.4%	92.3%	94.7%	96.3%	97.2%	97.7%	97.8%	98.0%	98.2%	98.5%	98.6%	98.7%	98.8%	99.0%
1991	8.1%	21.9%	43.5%	65.4%	80.2%	88.1%	92.4%	94.5%	96.2%	96.6%	96.9%	97.2%	97.5%	97.5%	97.8%	98.0%	98.1%	98.4%	98.4%
1992	7.7%	22.8%	44.5%	67.9%	81.1%	88.2%	92.1%	94.4%	95.6%	96.0%	96.4%	96.9%	97.0%	97.2%	97.3%	97.5%	97.7%	98.3%	98.4%
1993	7.8%	23.8%	48.0%	69.7%	81.4%	88.3%	91.9%	93.6%	94.6%	95.4%	95.8%	96.3%	96.5%	96.6%	96.8%	97.2%	97.7%	98.0%	98.3%
1994	7.6%	26.0%	51.9%	72.1%	82.9%	88.4%	90.5%	91.9%	92.9%	93.4%	94.0%	94.7%	95.2%	95.8%	96.2%	97.0%	97.3%	97.5%	97.8%
1995	8.1%	28.7%	54.5%	73.6%	82.9%	87.2%	88.9%	90.5%	91.7%	92.1%	93.0%	93.8%	94.5%	95.0%	95.7%	96.1%	96.4%	96.6%	96.9%
1996	9.6%	31.4%	56.2%	73.8%	81.7%	85.6%	87.7%	89.0%	89.8%	91.3%	92.4%	93.5%	94.3%	95.2%	95.8%	96.2%	96.5%	96.8%	97.1%
1997	9.5%	32.0%	56.7%	72.5%	80.1%	84.2%	86.7%	88.4%	90.2%	92.0%	93.0%	93.9%	94.8%	95.3%	95.7%	96.1%	96.5%	96.9%	97.3%
1998	9.4%	32.3%	55.4%	70.2%	78.8%	82.3%	84.9%	87.6%	90.1%	91.6%	93.0%	94.2%	94.8%	95.4%	95.8%	96.4%	96.8%	97.2%	97.5%
1999	11.8%	33.2%	54.1%	69.3%	76.9%	81.8%	85.9%	89.0%	91.0%	92.5%	93.5%	94.5%	95.3%	95.9%	96.3%	96.7%	97.1%	97.5%	97.9%
2000	11.5%	31.8%	53.0%	66.6%	75.8%	82.3%	87.1%	89.9%	91.8%	93.2%	94.2%	95.0%	95.4%	95.9%	96.5%	96.8%	97.0%	97.4%	97.7%
2001	9.7%	31.7%	51.0%	66.0%	77.1%	84.0%	88.0%	90.3%	91.8%	93.2%	93.9%	94.5%	95.1%	95.7%	96.1%	96.7%	97.0%	97.4%	97.8%
2002	9.1%	31.6%	50.5%	68.2%	79.9%	86.0%	89.2%	91.3%	93.0%	93.7%	94.5%	95.2%	95.8%	96.5%	97.0%	97.3%	97.6%	98.0%	98.2%
2003	8.8%	30.9%	52.5%	71.5%	80.8%	85.6%	88.5%	90.3%	91.1%	91.9%	92.8%	93.8%	94.4%	95.2%	95.8%	96.2%	96.7%	96.9%	
2004	9.0%	32.8%	56.7%	71.1%	79.6%	84.2%	86.6%	88.1%	89.6%	91.2%	92.3%	93.3%	94.0%	94.8%	95.4%	96.0%	96.4%		
2005	9.3%	39.6%	60.2%	72.6%	80.3%	83.4%	85.2%	86.7%	88.9%	90.8%	92.2%	93.5%	94.2%	94.9%	95.6%	96.1%			
2006	10.9%	41.3%	60.2%	72.1%	78.4%	82.0%	84.7%	87.3%	89.4%	91.1%	92.7%	93.6%	94.5%	95.4%	95.9%				
2007	13.2%	41.9%	60.2%	71.1%	78.0%	82.4%	85.5%	88.0%	89.7%	91.5%	93.0%	94.3%	95.0%	95.4%					
2008	14.1%	42.7%	60.1%	70.9%	78.4%	83.6%	86.7%	89.1%	91.0%	92.3%	93.4%	94.5%	95.1%						
2009	14.4%	41.2%	58.5%	71.1%	78.3%	83.4%	86.7%	89.7%	91.7%	93.1%	94.3%	94.9%							
2010	14.6%	41.3%	59.6%	71.7%	79.9%	84.9%	88.5%	91.1%	92.8%	94.0%	95.1%								
2011	16.0%	40.5%	59.4%	71.8%	79.6%	85.3%	89.0%	91.5%	93.5%	94.7%									
2012	16.0%	41.3%	60.3%	73.0%	81.5%	86.4%	89.8%	92.0%	93.5%										
2013	15.1%	40.6%	60.2%	74.8%	83.2%	88.3%	91.1%	93.0%											
2014	14.8%	40.4%	61.3%	75.2%	83.3%	88.1%	91.4%												
2015	14.0%	40.5%	61.3%	75.7%	83.8%	88.7%													
2016	14.6%	41.7%	62.5%	76.8%	84.4%														
2017	14.3%	41.5%	62.4%	76.0%															
2018	14.9%	41.5%	62.1%																
2019	15.1%	41.4%																	
2020	14.3%																		

Ratios of Paid to Incurred Losses - Indemnity

Accident	Evaluated as of (in months):																		
Year	231	243	255	267	279	291	303	315	327	339	351	363	375	387	399	411	423	435	447
1980	98.3%	98.5%	98.6%	98.6%	98.7%	98.7%	98.8%	98.9%	98.9%	99.2%	99.3%								
1981	98.8%	99.0%	98.9%	99.0%	98.8%	98.8%	98.8%	99.0%	99.1%	99.2%	99.3%								
1982	98.4%	98.6%	98.6%	98.6%	98.6%	98.8%	99.0%	99.0%	99.1%	99.2%	99.2%								
1983	98.9%	98.9%	98.9%	98.9%	99.0%	99.1%	99.2%	99.3%	99.4%	99.4%	99.4%	99.4%	99.4%	99.4%	99.5%	99.5%	99.5%	99.6%	99.6%
1984	99.1%	99.1%	99.1%	99.2%	99.2%	99.3%	99.4%	99.4%	99.4%	99.5%	99.5%	99.5%	99.6%	99.6%	99.7%	99.7%	99.7%	99.7%	
1985	99.1%	99.1%	99.3%	99.3%	99.4%	99.4%	99.5%	99.5%	99.5%	99.5%	99.5%	99.6%	99.6%	99.7%	99.7%	99.7%	99.7%		
1986	99.0%	99.0%	99.2%	99.2%	99.3%	99.3%	99.4%	99.3%	99.3%	99.3%	99.4%	99.5%	99.6%	99.7%	99.7%	99.7%	99.7%		
1987	98.9%	99.0%	99.1%	99.2%	99.3%	99.3%	99.3%	99.3%	99.4%	99.5%	99.5%	99.5%	99.5%	99.6%	99.6%	99.6%			
1988	99.0%	99.1%	99.1%	99.3%	99.3%	99.3%	99.3%	99.3%	99.4%	99.5%	99.5%	99.6%	99.6%	99.6%					
1989	98.8%	99.0%	99.0%	99.1%	99.2%	99.3%	99.4%	99.5%	99.5%	99.5%	99.6%	99.6%	99.7%						
1990	99.0%	99.1%	99.2%	99.2%	99.3%	99.4%	99.5%	99.6%	99.6%	99.6%	99.6%	99.7%							
1991	98.6%	98.7%	98.8%	98.9%	99.0%	99.1%	99.2%	99.2%	99.3%	99.4%	99.4%								
1992	98.5%	98.7%	98.8%	98.9%	99.0%	99.1%	99.2%	99.3%	99.4%	99.4%									
1993	98.4%	98.6%	98.7%	98.8%	99.0%	99.1%	99.1%	99.2%	99.2%										
1994	97.9%	98.1%	98.3%	98.4%	98.5%	98.7%	98.8%	98.7%											
1995	97.3%	97.7%	97.9%	98.1%	98.2%	98.5%	98.6%												
1996	97.4%	97.7%	98.0%	98.1%	98.3%	98.4%													
1997	97.5%	97.8%	98.0%	98.2%	98.4%														
1998	97.7%	97.8%	98.1%	98.2%															
1999	98.1%	98.2%	98.3%																
2000	97.9%	98.1%																	
2001	98.0%																		

Source: WCIRB quarterly calls for experience

Ratios of Paid to Incurred Losses - Medical

Accident	Evaluated as of (in months):																		
Year	3	15	27	39	51	63	75	87	99	111	123	135	147	159	171	183	195	207	219
1980										93.2%	93.9%	94.0%	94.2%	93.9%	94.2%	94.4%	94.4%	95.1%	95.2%
1981									91.8%	93.0%	92.5%	94.1%	95.1%	94.2%	94.8%	94.8%	95.8%	96.0%	95.2%
1982								90.3%	90.5%	92.5%	93.1%	93.3%	93.4%	92.6%	92.9%	93.9%	94.2%	94.9%	94.1%
1983							89.4%	91.1%	92.7%	94.0%	94.2%	94.8%	95.3%	95.8%	95.9%	96.2%	96.1%	96.2%	96.2%
1984						87.0%	89.6%	92.0%	93.0%	93.6%	94.1%	94.8%	95.6%	96.3%	96.5%	96.7%	96.7%	96.7%	96.7%
1985					83.1%	87.3%	89.9%	91.3%	92.7%	94.0%	94.1%	94.5%	95.2%	96.0%	96.3%	96.3%	96.3%	96.3%	96.5%
1986				75.4%	81.8%	86.2%	89.4%	91.5%	92.3%	93.5%	93.8%	94.2%	95.7%	95.5%	95.9%	96.0%	96.0%	95.9%	95.2%
1987			63.9%	73.8%	81.5%	86.6%	89.4%	91.1%	92.1%	92.9%	93.5%	93.5%	94.1%	94.8%	95.1%	95.1%	95.0%	93.4%	94.0%
1988		46.3%	62.7%	74.1%	82.0%	86.3%	89.2%	91.4%	92.5%	94.0%	94.8%	95.1%	95.2%	95.6%	95.5%	95.5%	95.0%	95.0%	95.3%
1989	8.9%	43.7%	62.3%	75.1%	82.7%	87.3%	89.5%	91.5%	93.1%	93.6%	94.4%	95.0%	94.5%	94.7%	94.4%	93.3%	93.9%	94.7%	94.9%
1990	7.6%	44.7%	64.1%	76.0%	83.5%	88.3%	91.4%	93.5%	94.6%	95.0%	95.5%	95.2%	95.0%	94.7%	94.7%	94.9%	95.1%	95.3%	95.5%
1991	8.6%	43.4%	62.5%	74.9%	83.2%	88.4%	92.1%	93.2%	94.5%	94.7%	94.9%	94.9%	95.0%	94.8%	94.6%	94.7%	94.5%	94.8%	94.8%
1992	9.0%	44.7%	62.9%	76.5%	84.2%	88.7%	91.3%	92.9%	93.7%	93.5%	93.3%	93.4%	92.3%	92.4%	92.7%	93.3%	93.5%	93.8%	93.7%
1993	9.8%	46.4%	66.3%	77.8%	83.6%	87.8%	90.1%	91.7%	91.4%	91.1%	90.7%	90.3%	89.8%	90.3%	90.8%	90.2%	90.1%	90.3%	90.9%
1994	9.0%	45.8%	66.4%	78.4%	84.4%	88.1%	88.8%	88.8%	88.8%	88.3%	87.8%	87.9%	88.1%	88.3%	89.4%	90.1%	89.3%	89.5%	89.6%
1995	9.7%	49.0%	67.2%	76.7%	82.3%	84.8%	85.0%	85.5%	86.0%	84.6%	84.9%	85.3%	86.2%	86.4%	85.7%	86.0%	87.0%	87.4%	87.7%
1996	10.7%	50.4%	68.0%	77.7%	81.7%	83.5%	84.2%	85.2%	83.8%	84.5%	85.8%	86.2%	86.9%	87.2%	87.8%	87.9%	88.4%	89.1%	89.7%
1997	9.8%	49.1%	68.4%	77.0%	80.3%	82.2%	82.6%	81.4%	82.2%	83.5%	84.9%	85.1%	85.3%	85.5%	86.3%	86.8%	87.7%	88.7%	89.8%
1998	9.2%	49.8%	67.6%	74.2%	78.1%	78.7%	78.0%	80.2%	81.9%	83.2%	83.2%	84.1%	84.7%	85.8%	86.5%	87.1%	88.0%	88.4%	89.7%
1999	10.3%	49.2%	65.9%	73.5%	77.0%	78.2%	80.6%	82.3%	83.7%	83.7%	84.2%	85.3%	86.0%	86.8%	87.6%	88.1%	89.5%	90.8%	92.2%
2000	10.0%	45.8%	64.5%	71.4%	75.3%	78.8%	81.9%	83.5%	83.8%	85.1%	86.1%	86.4%	86.9%	87.4%	88.2%	89.3%	90.6%	92.1%	93.1%
2001	8.0%	45.3%	62.7%	70.6%	76.9%	80.4%	83.0%	83.9%	84.4%	84.6%	84.9%	85.6%	86.4%	87.1%	88.2%	89.9%	91.1%	92.4%	93.1%
2002	7.3%	44.7%	61.8%	71.6%	78.2%	82.7%	83.9%	85.1%	85.8%	86.1%	86.5%	87.3%	88.5%	89.4%	90.9%	92.1%	93.1%	94.0%	94.7%
2003	7.4%	44.4%	61.8%	71.5%	77.8%	81.1%	82.5%	83.5%	84.0%	84.3%	85.5%	86.7%	88.2%	89.6%	91.1%	92.2%	93.2%	93.7%	
2004	6.4%	42.8%	60.9%	69.9%	75.4%	78.4%	80.6%	80.9%	82.3%	83.7%	85.0%	86.9%	88.5%	90.1%	91.5%	92.7%	93.6%		
2005	9.4%	43.6%	59.3%	68.2%	75.5%	78.6%	79.8%	80.5%	82.5%	84.5%	86.0%	88.0%	89.5%	90.8%	92.1%	93.3%			
2006	10.0%	43.7%	58.9%	67.9%	74.1%	77.6%	80.0%	81.8%	83.4%	85.2%	87.4%	89.1%	90.6%	91.7%	92.9%				
2007	9.1%	43.5%	59.4%	68.6%	74.1%	77.6%	79.8%	82.7%	84.5%	86.4%	88.4%	89.8%	91.3%	92.5%					
2008	9.7%	45.0%	59.6%	68.2%	74.6%	78.3%	81.3%	83.8%	86.0%	88.0%	89.7%	91.1%	92.1%						
2009	11.3%	44.1%	57.8%	68.0%	73.8%	78.6%	82.0%	85.0%	87.3%	89.3%	90.9%	91.7%							
2010	11.7%	43.7%	58.7%	68.3%	75.7%	80.4%	84.3%	87.4%	89.8%	91.2%	92.9%								
2011	11.3%	42.1%	57.7%	68.2%	75.5%	80.6%	85.0%	88.2%	90.5%	92.0%									
2012	10.8%	41.8%	58.3%	69.6%	77.5%	82.7%	86.4%	89.3%	90.9%										
2013	10.3%	41.3%	58.0%	70.8%	78.6%	84.1%	87.5%	90.1%											
2014	11.7%	41.6%	59.8%	71.9%	79.9%	85.0%	88.4%												
2015	12.1%	40.9%	59.5%	71.2%	79.6%	84.6%													
2016	11.6%	42.0%	60.0%	72.5%	80.6%														
2017	13.6%	42.6%	60.9%	72.4%															
2018	12.6%	42.4%	61.2%																
2019	13.3%	42.2%																	
2020	12.5%																		

Ratios of Paid to Incurred Losses - Medical

Accident	Evaluated as of (in months):																		
Year	231	243	255	267	279	291	303	315	327	339	351	363	375	387	399	411	423	435	447
1980	95.4%	94.8%	94.8%	94.3%	94.2%	93.2%	92.8%	93.5%	93.5%	93.4%	93.1%								
1981	95.8%	95.8%	95.5%	95.3%	94.6%	94.9%	95.2%	95.7%	96.0%	96.2%	96.6%								
1982	94.1%	93.8%	93.4%	93.2%	93.2%	93.8%	94.2%	94.1%	93.9%	94.2%	94.3%								
1983	96.1%	95.8%	94.7%	95.6%	96.0%	95.7%	95.9%	95.8%	96.0%	96.1%	96.0%	96.1%	96.3%	96.4%	96.9%	97.4%	97.8%	97.6%	98.2%
1984	96.7%	96.4%	96.2%	96.3%	96.4%	96.7%	96.6%	96.8%	96.8%	96.9%	97.2%	97.2%	97.5%	97.9%	98.1%	98.2%	98.4%	98.6%	
1985	96.5%	96.1%	96.0%	96.0%	96.3%	96.8%	97.0%	96.9%	96.9%	97.0%	96.9%	97.1%	97.5%	97.8%	98.0%	98.2%	98.3%		
1986	95.3%	95.5%	95.7%	95.7%	95.8%	95.7%	95.7%	95.6%	95.6%	95.7%	96.1%	96.4%	97.1%	97.1%	97.1%	98.0%			
1987	94.8%	95.0%	95.6%	95.6%	95.1%	95.6%	95.5%	95.7%	95.9%	96.1%	96.3%	96.6%	96.7%	97.2%	96.8%				
1988	95.3%	95.8%	95.7%	95.7%	95.7%	96.2%	96.2%	96.4%	96.5%	96.6%	96.9%	97.4%	97.8%	97.9%					
1989	94.8%	94.8%	94.6%	94.6%	95.0%	94.9%	95.4%	95.7%	96.2%	96.6%	96.9%	97.3%	97.2%						
1990	95.4%	95.1%	95.2%	95.5%	95.7%	95.8%	96.6%	96.8%	96.9%	97.3%	97.7%	98.0%							
1991	94.8%	94.9%	95.2%	95.3%	95.8%	96.0%	96.3%	96.7%	97.0%	97.6%	97.8%								
1992	94.2%	94.2%	94.4%	94.8%	95.0%	95.5%	96.0%	96.3%	97.1%	97.2%									
1993	90.8%	90.5%	91.6%	92.4%	93.3%	94.1%	94.7%	95.5%	96.0%										
1994	90.1%	90.6%	91.2%	91.8%	93.0%	93.8%	94.4%	94.5%											
1995	89.4%	90.0%	91.0%	92.5%	93.4%	94.1%	94.6%												
1996	90.7%	91.6%	92.1%	92.9%	94.2%	94.8%													
1997	91.2%	92.1%	92.9%	93.6%	94.3%														
1998	90.4%	91.5%	92.1%	92.6%															
1999	93.3%	93.9%	94.7%																
2000	94.0%	94.6%																	
2001	94.0%																		

Source: WCIRB quarterly calls for experience

Average Indemnity Case Outstanding per Open Indemnity Claim

Accident	Evaluated as of (in months):												
Year	15	27	39	51	63	75	87	99	111	123	135	147	159
1997													36,968
1998												34,476	35,021
1999											32,866	32,188	32,582
2000										27,263	28,334	29,872	30,664
2001									23,884	25,572	27,067	28,220	30,110
2002								19,442	21,244	22,747	23,584	25,760	25,649
2003							21,058	24,249	27,895	30,860	33,939	35,679	35,730
2004						18,179	20,743	23,455	24,717	29,255	31,357	33,245	35,090
2005					15,313	18,368	21,808	23,145	25,868	27,805	28,458	31,554	33,746
2006				15,223	18,366	20,975	22,461	25,367	26,994	27,481	30,957	32,744	34,400
2007			14,336	16,508	18,518	20,582	23,899	27,100	29,204	31,360	32,520	36,472	42,123
2008		12,306	15,132	16,855	18,309	21,284	23,878	26,713	30,551	33,560	36,891	41,290	
2009	8,958	12,991	14,842	17,078	19,200	21,594	23,512	25,992	28,961	32,174	37,527		
2010	8,942	12,531	14,716	16,409	18,225	20,213	22,415	25,251	28,814	31,909			
2011	9,623	13,178	15,218	17,450	18,928	20,810	23,461	26,064	29,337				
2012	9,532	12,924	14,952	16,363	18,719	21,181	24,855	28,916					
2013	9,557	13,078	14,215	15,739	17,677	20,706	24,561						
2014	9,665	13,125	15,214	17,625	20,572	22,577							
2015	10,017	14,245	16,690	19,669	22,154								
2016	10,147	14,596	17,283	20,430									
2017	10,827	16,047	19,535										
2018	11,564	16,827											
2019	12,015												

Accident	Annual Change												
Year	15	27	39	51	63	75	87	99	111	123	135	147	159
1998													-5.3%
1999												-6.6%	-7.0%
2000											-13.8%	-7.2%	-5.9%
2001										-6.2%	-4.5%	-5.5%	-1.8%
2002								-11.1%	-11.0%	-12.9%	-8.7%	-14.8%	
2003								24.7%	31.3%	35.7%	43.9%	38.5%	39.3%
2004							-1.5%	-3.3%	-11.4%	-5.2%	-7.6%	-6.8%	-1.8%
2005						1.0%	5.1%	-1.3%	4.7%	-5.0%	-9.2%	-5.1%	-3.8%
2006					19.9%	14.2%	3.0%	9.6%	4.4%	-1.2%	8.8%	3.8%	1.9%
2007				8.4%	0.8%	-1.9%	6.4%	6.8%	8.2%	14.1%	5.0%	11.4%	22.5%
2008			5.6%	2.1%	-1.1%	3.4%	-0.1%	-1.4%	4.6%	7.0%	13.4%	13.2%	
2009		5.6%	-1.9%	1.3%	4.9%	1.5%	-1.5%	-2.7%	-5.2%	-4.1%	1.7%		
2010	-0.2%	-3.5%	-0.8%	-3.9%	-5.1%	-6.4%	-4.7%	-2.9%	-0.5%	-0.8%			
2011	7.6%	5.2%	3.4%	6.3%	3.9%	3.0%	4.7%	3.2%	1.8%				
2012	-1.0%	-1.9%	-1.7%	-6.2%	-1.1%	1.8%	5.9%	10.9%					
2013	0.3%	1.2%	-4.9%	-3.8%	-5.6%	-2.2%	-1.2%						
2014	1.1%	0.4%	7.0%	12.0%	16.4%	9.0%							
2015	3.6%	8.5%	9.7%	11.6%	7.7%								
2016	1.3%	2.5%	3.6%	3.9%									
2017	6.7%	9.9%	13.0%										
2018	6.8%	4.9%											
2019	3.9%												

Source: WCIRB quarterly calls for experience

Average Paid Indemnity Loss per Closed Indemnity Claim

Accident	Evaluated as of (in months):												
<u>Year</u>	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>	<u>99</u>	<u>111</u>	<u>123</u>	<u>135</u>	<u>147</u>	<u>159</u>
1997													16,693
1998												18,271	18,519
1999											19,571	19,861	20,191
2000										20,109	20,520	20,848	21,144
2001									20,868	21,340	21,825	22,246	22,753
2002								19,413	19,928	20,456	20,975	21,559	21,923
2003							18,238	18,873	19,570	20,213	20,966	21,467	21,958
2004						13,528	14,261	15,015	15,794	16,641	17,165	17,663	18,083
2005					10,574	11,657	12,514	13,397	14,436	15,091	15,644	16,096	16,457
2006				9,594	11,361	12,676	13,919	15,109	15,970	16,738	17,349	17,825	18,227
2007			7,583	10,198	12,151	13,846	15,368	16,480	17,442	18,240	18,872	19,368	19,826
2008		4,700	8,306	11,287	13,710	15,908	17,318	18,552	19,442	20,117	20,747	21,305	
2009	1,966	4,896	8,672	11,951	14,805	16,802	18,488	19,671	20,611	21,422	22,016		
2010	1,939	4,993	8,906	12,522	15,155	17,187	18,709	19,812	20,600	21,267			
2011	2,172	5,382	9,481	12,887	15,514	17,297	18,672	19,778	20,496				
2012	2,259	5,934	10,038	13,266	15,579	17,331	18,590	19,533					
2013	2,615	6,318	10,481	13,644	15,851	17,379	18,417						
2014	2,691	6,720	11,149	14,513	16,766	18,242							
2015	3,006	7,359	11,875	15,192	17,256								
2016	3,252	7,699	12,005	15,085									
2017	3,341	7,785	12,017										
2018	3,566	8,204											
2019	3,812												

Accident	Annual Change												
<u>Year</u>	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>	<u>99</u>	<u>111</u>	<u>123</u>	<u>135</u>	<u>147</u>	<u>159</u>
1998													10.9%
1999												8.7%	9.0%
2000											4.8%	5.0%	4.7%
2001										6.1%	6.4%	6.7%	7.6%
2002								-4.5%	-4.1%	-3.9%	-3.1%	-3.6%	
2003							-2.8%	-1.8%	-1.2%	0.0%	-0.4%	0.2%	
2004						-13.8%	-12.2%	-10.8%	-8.6%	-9.3%	-8.9%	-8.9%	-9.0%
2005					7.4%	8.7%	11.2%	12.8%	10.6%	10.9%	10.9%	10.7%	10.8%
2006				6.3%	7.0%	9.2%	10.4%	9.1%	9.2%	9.0%	8.8%	8.7%	8.8%
2007			9.5%	10.7%	12.8%	14.9%	12.7%	12.6%	11.5%	10.3%	9.9%	10.0%	
2008		4.2%	4.4%	5.9%	8.0%	5.6%	6.8%	6.0%	6.0%	6.5%	6.1%		
2009	-1.4%	2.0%	2.7%	4.8%	2.4%	2.3%	1.2%	0.7%	-0.1%	-0.7%			
2010	12.0%	7.8%	6.5%	2.9%	2.4%	0.6%	-0.2%	-0.2%	-0.5%				
2011	4.0%	10.3%	5.9%	2.9%	0.4%	0.2%	-0.4%	-1.2%					
2012	15.8%	6.5%	4.4%	2.8%	1.7%	0.3%	-0.9%						
2013	2.9%	6.4%	6.4%	6.4%	5.8%	5.0%							
2014	11.7%	9.5%	6.5%	4.7%	2.9%								
2015	8.2%	4.6%	1.1%	-0.7%									
2016	2.8%	1.1%	0.1%										
2017	6.7%	5.4%											
2018	6.9%												
2019													

Source: WCIRB quarterly calls for experience

Average Medical Case Outstanding per Open Indemnity Claim

Accident	Evaluated as of (in months):												
<u>Year</u>	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>	<u>99</u>	<u>111</u>	<u>123</u>	<u>135</u>	<u>147</u>	<u>159</u>
1997													100,973
1998												100,349	107,031
1999											88,267	97,348	105,393
2000										67,977	80,181	91,390	103,350
2001								59,456	71,065	81,354	90,778	105,070	
2002								44,713	54,085	65,896	74,778	85,677	92,697
2003							38,945	48,576	61,294	71,141	83,995	88,010	90,184
2004						32,264	42,401	51,327	60,468	75,074	80,483	84,303	87,581
2005					27,378	35,700	46,566	54,229	65,025	74,819	78,386	85,380	92,256
2006				25,772	32,306	39,325	47,614	59,252	67,165	71,624	78,305	83,616	92,128
2007			22,383	28,174	34,732	43,421	52,465	62,328	71,972	79,722	89,199	95,034	104,829
2008		18,571	23,458	28,635	35,609	44,538	53,610	63,114	71,491	78,921	87,748	98,810	
2009	15,132	20,152	24,046	30,366	36,820	43,675	51,473	59,267	67,053	75,607	91,067		
2010	15,258	19,787	24,654	29,721	35,915	41,737	47,918	53,877	64,096	68,649			
2011	16,793	21,790	26,333	32,091	38,616	43,358	49,220	57,110	66,010				
2012	17,112	21,070	24,989	29,067	34,583	40,826	47,770	58,068					
2013	16,525	20,783	23,288	28,080	32,936	39,816	47,123						
2014	16,130	19,249	22,718	27,195	32,564	38,635							
2015	16,512	20,285	25,291	30,834	37,350								
2016	16,976	21,271	26,010	31,254									
2017	17,806	22,570	28,487										
2018	18,860	23,149											
2019	18,590												

Accident	Annual Change												
<u>Year</u>	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>	<u>99</u>	<u>111</u>	<u>123</u>	<u>135</u>	<u>147</u>	<u>159</u>
1998													6.0%
1999												-3.0%	-1.5%
2000											-9.2%	-6.1%	-1.9%
2001										4.5%	1.5%	-0.7%	1.7%
2002								-9.0%	-7.3%	-8.1%	-5.6%	-11.8%	
2003							8.6%	13.3%	8.0%	12.3%	2.7%	-2.7%	
2004							8.9%	5.7%	-1.3%	5.5%	-4.2%	-4.2%	-2.9%
2005						10.7%	9.8%	5.7%	7.5%	-0.3%	-2.6%	1.3%	5.3%
2006					18.0%	10.2%	2.3%	9.3%	3.3%	-4.3%	-0.1%	-2.1%	-0.1%
2007				9.3%	7.5%	10.4%	10.2%	5.2%	7.2%	11.3%	13.9%	13.7%	13.8%
2008			4.8%	1.6%	2.5%	2.6%	2.2%	1.3%	-0.7%	-1.0%	-1.6%	4.0%	
2009		8.5%	2.5%	6.0%	3.4%	-1.9%	-4.0%	-6.1%	-6.2%	-4.2%	3.8%		
2010	0.8%	-1.8%	2.5%	-2.1%	-2.5%	-4.4%	-6.9%	-9.1%	-4.4%	-9.2%			
2011	10.1%	10.1%	6.8%	8.0%	7.5%	3.9%	2.7%	6.0%	3.0%				
2012	1.9%	-3.3%	-5.1%	-9.4%	-10.4%	-5.8%	-2.9%	1.7%					
2013	-3.4%	-1.4%	-6.8%	-3.4%	-4.8%	-2.5%	-1.4%						
2014	-2.4%	-7.4%	-2.4%	-3.2%	-1.1%	-3.0%							
2015	2.4%	5.4%	11.3%	13.4%	14.7%								
2016	2.8%	4.9%	2.8%	1.4%									
2017	4.9%	6.1%	9.5%										
2018	5.9%	2.6%											
2019	-1.4%												

Source: WCIRB quarterly calls for experience

Average Medical Paid per Closed Indemnity Claim*

Accident	Evaluated as of (in months):												
Year	15	27	39	51	63	75	87	99	111	123	135	147	159
1997													11,456
1998												13,697	14,108
1999											15,043	15,585	16,262
2000										16,732	17,343	17,941	18,448
2001									18,648	19,394	20,077	20,857	21,849
2002								18,314	19,080	19,873	20,712	21,705	22,308
2003							16,310	17,204	18,131	19,031	20,206	21,015	21,858
2004						12,911	14,003	15,022	16,172	17,509	18,518	19,433	20,168
2005					11,373	12,903	13,965	15,341	17,043	18,334	19,440	20,266	20,927
2006				10,450	12,633	14,432	16,089	17,851	19,164	20,537	21,642	22,507	23,229
2007			8,718	11,649	13,983	16,194	18,626	20,364	22,052	23,411	24,507	25,381	26,258
2008		6,027	9,712	12,956	15,937	19,057	21,175	23,175	24,639	25,761	26,782	27,800	
2009	3,278	6,267	10,226	14,106	17,970	20,779	23,255	25,071	26,538	27,880	28,848		
2010	3,213	6,539	10,722	15,155	18,704	21,510	23,876	25,517	26,773	27,908			
2011	2,639	6,108	10,656	14,662	18,058	20,750	22,796	24,348	25,372				
2012	2,830	6,583	10,980	14,606	17,545	19,756	21,388	22,645					
2013	2,973	6,695	10,912	14,304	16,973	18,828	20,096						
2014	2,989	6,851	10,971	14,384	16,831	18,480							
2015	3,231	7,263	11,333	14,566	16,561								
2016	3,462	7,489	11,315	14,059									
2017	3,565	7,704	11,398										
2018	3,665	7,988											
2019	3,912												

Accident	Annual Change												
Year	15	27	39	51	63	75	87	99	111	123	135	147	159
1998													23.2%
1999												13.8%	15.3%
2000											15.3%	15.1%	13.4%
2001										15.9%	15.8%	16.3%	18.4%
2002									2.3%	2.5%	3.2%	4.1%	2.1%
2003								-6.1%	-5.0%	-4.2%	-2.4%	-3.2%	-2.0%
2004							-14.1%	-12.7%	-10.8%	-8.0%	-8.4%	-7.5%	-7.7%
2005						-0.1%	-0.3%	2.1%	5.4%	4.7%	5.0%	4.3%	3.8%
2006					11.1%	11.9%	15.2%	16.4%	12.4%	12.0%	11.3%	11.1%	11.0%
2007				11.5%	10.7%	12.2%	15.8%	14.1%	15.1%	14.0%	13.2%	12.8%	13.0%
2008			11.4%	11.2%	14.0%	17.7%	13.7%	13.8%	11.7%	10.0%	9.3%	9.5%	
2009		4.0%	5.3%	8.9%	12.8%	9.0%	9.8%	8.2%	7.7%	8.2%	7.7%		
2010*	--	--	--	--	--	--	--	--	--	--			
2011*	--	--	--	--	--	--	--	--	--				
2012*	--	--	--	--	--	--	--	--					
2013	5.1%	1.7%	-0.6%	-2.1%	-3.3%	-4.7%	-6.0%						
2014	0.5%	2.3%	0.5%	0.6%	-0.8%	-1.8%							
2015	8.1%	6.0%	3.3%	1.3%	-1.6%								
2016	7.2%	3.1%	-0.2%	-3.5%									
2017	3.0%	2.9%	0.7%										
2018	2.8%	3.7%											
2019	6.7%												

* Entries for accident years 2010 and 2011 only reflect the paid cost of medical cost containment programs attributable to policies with effective dates prior to July 1, 2010. Entries for accident year 2012 and forward exclude the paid cost of medical cost containment programs.

Source: WCIRB quarterly calls for experience

Estimated Ultimate Indemnity Claim Settlement Ratios

Accident	Evaluated as of (in months):															
Year	15	27	39	51	63	75	87	99	111	123	135	147	159	171	183	195
1995															98.1%	98.3%
1996														97.8%	98.0%	98.3%
1997													97.2%	97.5%	97.7%	97.9%
1998												96.5%	97.0%	97.3%	97.6%	97.9%
1999											95.9%	96.4%	96.8%	97.2%	97.6%	97.8%
2000										94.6%	95.4%	96.0%	96.5%	97.1%	97.4%	97.7%
2001									92.4%	93.5%	94.5%	95.2%	96.0%	96.5%	96.9%	97.3%
2002								91.1%	92.6%	93.8%	94.8%	95.8%	96.4%	96.9%	97.3%	97.6%
2003							89.0%	91.0%	92.6%	93.9%	95.2%	95.8%	96.4%	97.0%	97.4%	97.8%
2004						86.0%	88.9%	91.0%	92.7%	94.4%	95.4%	96.1%	96.8%	97.3%	97.7%	98.1%
2005					82.0%	86.0%	89.0%	91.1%	93.3%	94.6%	95.7%	96.4%	97.0%	97.6%	98.0%	
2006				75.5%	81.7%	85.7%	88.6%	91.4%	93.2%	94.6%	95.7%	96.4%	97.1%	97.6%		
2007			65.2%	74.6%	80.7%	85.1%	89.1%	91.5%	93.5%	94.9%	96.0%	96.8%	97.4%			
2008		49.4%	63.0%	72.8%	79.7%	85.4%	89.0%	91.9%	93.8%	95.1%	96.2%	97.0%				
2009	29.4%	47.3%	61.3%	71.6%	79.7%	85.1%	89.2%	92.0%	93.9%	95.4%	96.4%					
2010	29.4%	47.9%	61.9%	73.6%	81.2%	86.7%	90.5%	93.1%	94.8%	96.1%						
2011	29.3%	48.1%	63.6%	74.9%	82.6%	87.7%	91.4%	93.9%	95.4%							
2012	28.9%	49.3%	65.1%	76.3%	83.8%	89.0%	92.4%	94.5%								
2013	29.0%	50.4%	66.5%	78.1%	85.7%	90.3%	93.4%									
2014	29.3%	51.6%	67.9%	79.7%	86.9%	91.1%										
2015	30.0%	53.6%	70.8%	82.0%	88.4%											
2016	31.4%	56.1%	73.4%	83.6%												
2017	33.9%	59.0%	75.1%													
2018	34.4%	59.0%														
2019	34.5%															

Source: WCIRB quarterly calls for experience

Distribution of Estimated Ultimate Number of Claims by Injury Type

I. Distribution of Ultimate Number of Indemnity Claims

Accident <u>Year</u>	Permanent <u>Indemnity</u>	Temporary <u>Indemnity</u>	<u>Total</u>
2002	54.3%	45.7%	100%
2003	53.8%	46.2%	100%
2004	49.7%	50.3%	100%
2005	46.2%	53.8%	100%
2006	47.2%	52.8%	100%
2007	48.3%	51.7%	100%
2008	50.4%	49.6%	100%
2009	51.8%	48.2%	100%
2010	51.3%	48.7%	100%
2011	51.3%	48.7%	100%
2012	50.6%	49.4%	100%
2013	50.5%	49.5%	100%
2014	51.0%	49.0%	100%
2015	51.6%	48.4%	100%
2016	51.1%	48.9%	100%
2017	50.9%	49.1%	100%
2018*	50.3%	49.7%	100%

II. Distribution of Ultimate Number of All Claims

Accident <u>Year</u>	Permanent <u>Indemnity**</u>	Temporary <u>Indemnity</u>	Medical <u>Only</u>	<u>Total</u>
2002	18.9%	15.9%	65.2%	100%
2003	18.7%	16.0%	65.3%	100%
2004	15.6%	15.8%	68.6%	100%
2005	13.4%	15.6%	71.0%	100%
2006	13.6%	15.2%	71.2%	100%
2007	14.3%	15.3%	70.4%	100%
2008	15.4%	15.2%	69.4%	100%
2009	17.2%	15.9%	66.9%	100%
2010	17.7%	16.8%	65.5%	100%
2011	18.2%	17.3%	64.5%	100%
2012	18.4%	17.9%	63.7%	100%
2013	18.9%	18.5%	62.6%	100%
2014	19.1%	18.3%	62.6%	100%
2015	19.2%	18.0%	62.8%	100%
2016	19.1%	18.3%	62.6%	100%
2017	18.2%	17.6%	64.2%	100%
2018*	18.0%	17.7%	64.3%	100%

* Accident year 2018 experience is partial in that it only reflects experience from policy year 2017.

** Permanent indemnity consists of the death, permanent total, and permanent partial injury types.

Source: WCIRB unit statistical data

Quarterly Incurred Indemnity Loss Development Factors
Through March 31, 2020

Age in	Accident Year																						
Months	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
6/3	2.542	2.715	2.755	2.740	2.841	2.834	2.736	2.463	2.417	2.724	2.785	3.031	3.116	3.052	3.238	3.344	3.303	3.209	3.201	3.372	3.200	3.227	
9/6	1.750	1.808	1.780	1.784	1.790	1.808	1.776	1.618	1.656	1.776	1.820	1.848	1.904	2.001	1.966	1.940	1.960	1.948	1.945	1.874	1.998	2.017	
12/9	1.437	1.530	1.518	1.500	1.520	1.473	1.460	1.355	1.448	1.511	1.510	1.530	1.564	1.632	1.587	1.585	1.570	1.578	1.578	1.580	1.578	1.597	
15/12	1.229	1.260	1.268	1.250	1.257	1.238	1.180	1.149	1.189	1.234	1.248	1.293	1.306	1.306	1.303	1.301	1.301	1.313	1.309	1.298	1.298	1.295	
18/15	1.172	1.202	1.188	1.184	1.206	1.167	1.101	1.103	1.140	1.158	1.182	1.194	1.197	1.195	1.206	1.178	1.190	1.187	1.189	1.177	1.183		
21/18	1.145	1.140	1.150	1.148	1.153	1.127	1.066	1.096	1.117	1.128	1.139	1.153	1.140	1.146	1.141	1.141	1.132	1.137	1.134	1.138	1.123		
24/21	1.126	1.112	1.121	1.111	1.117	1.094	1.045	1.082	1.098	1.106	1.106	1.114	1.119	1.117	1.111	1.104	1.114	1.111	1.104	1.100	1.102		
27/24	1.074	1.096	1.093	1.100	1.094	1.073	1.045	1.070	1.082	1.081	1.088	1.089	1.091	1.085	1.087	1.081	1.082	1.087	1.079	1.078	1.071		
30/27	1.078	1.069	1.074	1.082	1.064	1.051	1.040	1.054	1.057	1.072	1.075	1.075	1.080	1.071	1.068	1.067	1.074	1.066	1.064	1.059			
33/30	1.045	1.058	1.048	1.062	1.047	1.032	1.036	1.042	1.049	1.053	1.059	1.052	1.064	1.053	1.060	1.047	1.055	1.050	1.047	1.047			
36/33	1.043	1.046	1.039	1.046	1.035	1.020	1.029	1.033	1.039	1.043	1.051	1.049	1.049	1.043	1.041	1.043	1.042	1.036	1.037	1.038			
39/36	1.038	1.041	1.035	1.038	1.028	1.017	1.027	1.029	1.031	1.033	1.040	1.039	1.039	1.041	1.035	1.031	1.036	1.030	1.028	1.028			
42/39	1.027	1.028	1.034	1.030	1.023	1.018	1.020	1.020	1.031	1.033	1.036	1.038	1.035	1.032	1.028	1.031	1.030	1.027	1.026				
45/42	1.024	1.026	1.026	1.020	1.009	1.019	1.018	1.024	1.026	1.028	1.030	1.035	1.027	1.033	1.022	1.024	1.024	1.024	1.021				
48/45	1.025	1.020	1.022	1.013	1.008	1.013	1.013	1.021	1.019	1.021	1.024	1.024	1.026	1.023	1.024	1.020	1.020	1.016	1.017				
51/48	1.022	1.017	1.018	1.015	1.010	1.016	1.010	1.018	1.021	1.018	1.022	1.023	1.021	1.018	1.017	1.015	1.019	1.015	1.014				
54/51	1.019	1.018	1.013	1.009	1.007	1.017	1.009	1.017	1.021	1.020	1.021	1.020	1.020	1.016	1.019	1.015	1.014	1.013					
57/54	1.014	1.017	1.012	1.006	1.008	1.011	1.011	1.018	1.017	1.014	1.018	1.017	1.015	1.014	1.013	1.011	1.014	1.011					
60/57	1.013	1.014	1.007	1.005	1.008	1.009	1.011	1.013	1.019	1.016	1.013	1.015	1.012	1.014	1.012	1.012	1.011	1.007					
63/60	1.012	1.012	1.007	1.007	1.008	1.008	1.010	1.014	1.013	1.015	1.011	1.014	1.014	1.009	1.012	1.008	1.010	1.007					
66/63	1.014	1.009	1.005	1.006	1.011	1.008	1.010	1.013	1.016	1.014	1.015	1.013	1.013	1.009	1.010	1.009	1.008						
69/66	1.010	1.007	1.003	1.005	1.008	1.007	1.011	1.012	1.011	1.010	1.009	1.012	1.007	1.010	1.010	1.007	1.006						
72/69	1.009	1.006	1.005	1.005	1.005	1.009	1.009	1.013	1.011	1.009	1.009	1.009	1.010	1.008	1.007	1.007	1.005						
75/72	1.006	1.004	1.004	1.005	1.003	1.005	1.007	1.010	1.011	1.010	1.010	1.008	1.007	1.004	1.006	1.007	1.004						
78/75	1.007	1.004	1.003	1.007	1.005	1.006	1.006	1.012	1.009	1.010	1.006	1.006	1.006	1.007	1.005	1.006							
81/78	1.005	1.002	1.003	1.004	1.004	1.005	1.006	1.010	1.009	1.007	1.007	1.006	1.006	1.007	1.005	1.005							
84/81	1.003	1.003	1.005	1.003	1.006	1.006	1.007	1.008	1.005	1.009	1.006	1.004	1.007	1.004	1.007	1.003							
87/84	1.003	1.003	1.002	1.003	1.004	1.002	1.007	1.010	1.007	1.004	1.005	1.006	1.004	1.006	1.004	1.003							
90/87	1.001	1.003	1.003	1.003	1.003	1.004	1.008	1.008	1.008	1.008	1.004	1.005	1.005	1.005	1.004								
93/90	1.001	1.002	1.004	1.003	1.002	1.005	1.006	1.008	1.006	1.007	1.006	1.003	1.004	1.005	1.004								
96/93	1.002	1.003	1.001	1.004	1.002	1.006	1.006	1.003	1.002	1.003	1.004	1.004	1.003	1.003	1.003								

Source: WCIRB accident year experience calls

Quarterly Incurred Medical Loss Development Factors *
Through March 31, 2020

Age in	Accident Year																					
Months	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
6/3	2.561	2.661	2.536	2.624	2.797	2.805	2.671	2.530	2.584	2.662	2.782	2.892	2.992	2.757	2.853	2.843	2.921	2.863	3.019	3.209	2.891	2.830
9/6	1.705	1.733	1.713	1.725	1.768	1.762	1.703	1.670	1.650	1.744	1.717	1.807	1.800	1.827	1.833	1.819	1.840	1.884	1.755	1.740	1.820	1.845
12/9	1.418	1.461	1.463	1.447	1.570	1.425	1.400	1.375	1.453	1.443	1.466	1.454	1.488	1.521	1.484	1.500	1.482	1.451	1.487	1.448	1.459	1.470
15/12	1.144	1.168	1.201	1.207	1.203	1.197	1.132	1.145	1.138	1.182	1.167	1.199	1.206	1.228	1.211	1.207	1.199	1.206	1.215	1.184	1.191	1.183
18/15	1.093	1.116	1.123	1.144	1.151	1.126	1.086	1.087	1.103	1.106	1.126	1.135	1.129	1.141	1.136	1.117	1.114	1.094	1.095	1.087	1.096	
21/18	1.078	1.086	1.101	1.122	1.116	1.093	1.055	1.061	1.073	1.081	1.090	1.097	1.101	1.103	1.085	1.088	1.077	1.082	1.069	1.069	1.064	
24/21	1.074	1.072	1.080	1.083	1.082	1.060	1.040	1.052	1.070	1.074	1.067	1.074	1.080	1.080	1.067	1.064	1.055	1.059	1.057	1.046	1.044	
27/24	1.044	1.061	1.070	1.080	1.075	1.042	1.034	1.048	1.055	1.058	1.053	1.071	1.066	1.072	1.058	1.048	1.046	1.048	1.040	1.036	1.030	
30/27	1.044	1.052	1.058	1.070	1.051	1.038	1.039	1.049	1.046	1.054	1.057	1.048	1.063	1.052	1.046	1.037	1.044	1.037	1.032	1.028		
33/30	1.035	1.047	1.051	1.059	1.035	1.018	1.032	1.030	1.041	1.045	1.045	1.051	1.055	1.045	1.046	1.031	1.033	1.033	1.026	1.029		
36/33	1.037	1.042	1.035	1.040	1.029	1.016	1.024	1.034	1.042	1.033	1.042	1.040	1.041	1.037	1.028	1.026	1.027	1.021	1.021	1.020		
39/36	1.029	1.032	1.034	1.037	1.018	1.012	1.028	1.025	1.027	1.029	1.033	1.031	1.040	1.039	1.027	1.021	1.023	1.022	1.011	1.018		
42/39	1.025	1.031	1.036	1.026	1.019	1.013	1.017	1.020	1.025	1.035	1.036	1.037	1.037	1.031	1.022	1.026	1.022	1.017	1.010			
45/42	1.025	1.033	1.032	1.023	1.012	1.019	1.033	1.021	1.025	1.029	1.026	1.030	1.028	1.027	1.021	1.018	1.017	1.015	1.011			
48/45	1.028	1.023	1.026	1.017	1.008	1.013	1.025	1.018	1.022	1.025	1.029	1.034	1.022	1.023	1.020	1.018	1.014	1.008	1.012			
51/48	1.019	1.020	1.024	1.014	1.009	1.013	1.018	1.015	1.020	1.021	1.021	1.026	1.024	1.019	1.014	1.013	1.010	1.008	1.008			
54/51	1.025	1.027	1.017	1.016	1.010	1.012	1.021	1.019	1.022	1.022	1.027	1.023	1.019	1.018	1.015	1.011	1.009	1.009				
57/54	1.027	1.024	1.014	1.007	1.011	1.017	1.020	1.018	1.019	1.019	1.023	1.020	1.017	1.018	1.013	1.007	1.009	1.007				
60/57	1.021	1.021	1.015	1.009	1.008	1.014	1.020	1.019	1.018	1.017	1.019	1.016	1.015	1.014	1.012	1.007	1.007	1.005				
63/60	1.014	1.020	1.013	1.012	1.008	1.016	1.015	1.021	1.015	1.018	1.016	1.020	1.015	1.009	1.009	1.005	1.008	1.005				
66/63	1.023	1.016	1.010	1.012	1.015	1.013	1.015	1.022	1.019	1.018	1.017	1.015	1.010	1.008	1.008	1.006	1.010					
69/66	1.025	1.013	1.006	1.008	1.016	1.018	1.015	1.023	1.017	1.017	1.015	1.014	1.010	1.008	1.008	1.005	1.008					
72/69	1.020	1.009	1.007	1.009	1.015	1.010	1.014	1.015	1.013	1.014	1.012	1.011	1.010	1.007	1.005	1.005	1.002					
75/72	1.015	1.008	1.006	1.008	1.010	1.009	1.012	1.012	1.011	1.018	1.013	1.008	1.006	1.001	1.003	1.006	1.003					
78/75	1.012	1.012	1.008	1.012	1.010	1.011	1.018	1.013	1.012	1.012	1.010	1.008	1.008	1.006	1.005	1.003						
81/78	1.006	1.006	1.006	1.009	1.010	1.014	1.018	1.017	1.016	1.009	1.009	1.005	1.006	1.006	1.005	1.004						
84/81	1.008	1.006	1.009	1.014	1.009	1.007	1.012	1.011	1.008	1.010	1.008	1.007	1.005	1.001	1.003	1.002						
87/84	1.005	1.008	1.008	1.010	1.009	1.010	1.012	1.014	1.012	1.008	1.007	1.004	1.003	1.001	1.002	1.002						
90/87	1.002	1.005	1.008	1.008	1.009	1.012	1.009	1.009	1.013	1.008	1.006	1.006	1.003	1.006	1.006							
93/90	1.006	1.007	1.015	1.009	1.011	1.010	1.011	1.012	1.009	1.009	1.007	1.002	1.003	1.002	1.004							
96/93	1.007	1.007	1.010	1.012	1.008	1.010	1.011	1.009	1.005	1.006	1.005	1.003	1.002	1.001	1.003							

Source: WCIRB accident year experience calls

* Incurred medical loss development factors include the paid cost of medical cost containment programs (MCCP) for accident years 2011 and prior.

Quarterly Paid Indemnity Loss Development Factors
Through March 31, 2020

Age in	Accident Year																					
Months	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
6/3	4.325	4.024	4.170	4.461	4.720	4.908	4.745	4.512	4.376	4.495	4.553	4.807	4.911	4.722	4.854	5.099	5.076	5.056	5.087	5.272	4.987	5.081
9/6	2.284	2.367	2.283	2.369	2.443	2.424	2.399	2.303	2.259	2.375	2.377	2.398	2.452	2.432	2.484	2.462	2.462	2.484	2.456	2.446	2.538	2.505
12/9	1.826	1.806	1.839	1.855	1.897	1.876	1.841	1.774	1.812	1.834	1.810	1.825	1.861	1.869	1.877	1.866	1.879	1.910	1.882	1.892	1.891	1.903
15/12	1.499	1.536	1.538	1.552	1.550	1.516	1.491	1.456	1.482	1.488	1.481	1.507	1.532	1.539	1.506	1.539	1.540	1.559	1.571	1.544	1.527	1.522
18/15	1.380	1.399	1.395	1.401	1.403	1.379	1.331	1.306	1.306	1.327	1.332	1.343	1.355	1.361	1.361	1.353	1.364	1.372	1.366	1.358	1.353	
21/18	1.323	1.298	1.303	1.303	1.311	1.297	1.241	1.217	1.233	1.235	1.243	1.259	1.257	1.261	1.261	1.263	1.267	1.264	1.256	1.260	1.248	
24/21	1.259	1.257	1.256	1.258	1.260	1.244	1.183	1.181	1.195	1.191	1.194	1.206	1.209	1.215	1.213	1.204	1.216	1.211	1.206	1.205	1.206	
27/24	1.186	1.199	1.203	1.200	1.205	1.186	1.140	1.142	1.151	1.149	1.153	1.162	1.165	1.168	1.164	1.159	1.170	1.176	1.161	1.159	1.152	
30/27	1.157	1.161	1.165	1.175	1.172	1.161	1.122	1.117	1.126	1.129	1.130	1.141	1.141	1.137	1.134	1.141	1.147	1.142	1.137	1.131		
33/30	1.118	1.125	1.130	1.142	1.136	1.123	1.097	1.096	1.100	1.101	1.108	1.114	1.116	1.112	1.111	1.111	1.115	1.107	1.104	1.105		
36/33	1.102	1.103	1.103	1.115	1.111	1.097	1.085	1.081	1.080	1.084	1.092	1.094	1.098	1.091	1.091	1.096	1.092	1.089	1.088	1.083		
39/36	1.074	1.081	1.081	1.092	1.087	1.072	1.070	1.066	1.064	1.067	1.074	1.078	1.077	1.073	1.075	1.074	1.075	1.071	1.068	1.064		
42/39	1.067	1.071	1.077	1.080	1.073	1.063	1.059	1.058	1.058	1.062	1.067	1.067	1.071	1.070	1.065	1.064	1.066	1.062	1.059			
45/42	1.057	1.054	1.063	1.064	1.056	1.049	1.047	1.049	1.047	1.051	1.058	1.059	1.057	1.055	1.054	1.052	1.050	1.050	1.045			
48/45	1.049	1.050	1.055	1.053	1.046	1.044	1.041	1.044	1.043	1.047	1.049	1.051	1.050	1.048	1.048	1.048	1.045	1.041	1.040			
51/48	1.039	1.038	1.043	1.044	1.036	1.035	1.033	1.036	1.036	1.037	1.042	1.042	1.043	1.039	1.038	1.038	1.039	1.035	1.031			
54/51	1.035	1.038	1.036	1.037	1.034	1.035	1.030	1.028	1.035	1.036	1.038	1.041	1.038	1.036	1.036	1.033	1.032	1.031				
57/54	1.029	1.033	1.037	1.030	1.028	1.026	1.025	1.028	1.030	1.032	1.033	1.033	1.032	1.033	1.028	1.027	1.028	1.025				
60/57	1.025	1.030	1.027	1.026	1.024	1.024	1.024	1.024	1.028	1.029	1.029	1.032	1.027	1.030	1.028	1.025	1.025	1.023				
63/60	1.023	1.026	1.024	1.021	1.022	1.019	1.019	1.021	1.023	1.025	1.025	1.024	1.026	1.025	1.025	1.021	1.021	1.018				
66/63	1.023	1.023	1.023	1.021	1.019	1.019	1.019	1.020	1.025	1.025	1.025	1.025	1.023	1.022	1.022	1.018	1.018					
69/66	1.019	1.021	1.020	1.017	1.016	1.017	1.016	1.021	1.020	1.020	1.020	1.022	1.020	1.019	1.022	1.017	1.014					
72/69	1.018	1.016	1.018	1.016	1.016	1.015	1.017	1.015	1.020	1.019	1.019	1.019	1.019	1.019	1.016	1.014	1.016					
75/72	1.015	1.016	1.015	1.014	1.012	1.012	1.013	1.015	1.019	1.018	1.016	1.016	1.017	1.015	1.014	1.012	1.012					
78/75	1.014	1.014	1.012	1.013	1.012	1.011	1.012	1.015	1.017	1.016	1.015	1.016	1.016	1.015	1.013	1.011						
81/78	1.013	1.013	1.011	1.012	1.011	1.010	1.012	1.015	1.015	1.016	1.015	1.015	1.013	1.012	1.011	1.010						
84/81	1.011	1.011	1.013	1.010	1.010	1.009	1.011	1.013	1.015	1.014	1.013	1.012	1.013	1.013	1.011	1.010						
87/84	1.012	1.010	1.008	1.010	1.009	1.008	1.009	1.012	1.014	1.013	1.010	1.012	1.010	1.011	1.010	1.007						
90/87	1.008	1.009	1.010	1.009	1.008	1.008	1.011	1.012	1.013	1.012	1.011	1.010	1.010	1.010	1.009							
93/90	1.009	1.009	1.008	1.008	1.007	1.008	1.012	1.011	1.011	1.012	1.010	1.010	1.009	1.009	1.008							
96/93	1.008	1.009	1.006	1.007	1.007	1.007	1.008	1.011	1.011	1.008	1.010	1.010	1.009	1.010	1.007							

Source: WCIRB accident year experience calls

Quarterly Paid Medical Loss Development Factors *
Through March 31, 2020

Age in	Accident Year																					
Months	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
6/3	6.375	5.955	5.518	6.168	7.221	7.127	7.617	5.563	5.308	5.615	6.579	6.101	6.048	5.854	5.989	6.284	5.604	5.720	5.897	5.433	5.460	4.984
9/6	2.369	2.406	2.356	2.432	2.694	2.577	2.483	2.236	2.348	2.381	2.348	2.375	2.361	2.327	2.398	2.498	2.428	2.287	2.326	2.248	2.351	2.287
12/9	1.728	1.739	1.749	1.857	1.882	1.825	1.759	1.666	1.716	1.765	1.731	1.723	1.756	1.746	1.763	1.736	1.750	1.705	1.752	1.737	1.719	1.796
15/12	1.453	1.490	1.514	1.547	1.554	1.510	1.437	1.423	1.429	1.444	1.413	1.429	1.445	1.472	1.446	1.443	1.460	1.454	1.479	1.434	1.425	1.432
18/15	1.241	1.267	1.286	1.310	1.330	1.295	1.243	1.230	1.227	1.259	1.243	1.259	1.268	1.282	1.284	1.263	1.265	1.278	1.263	1.250	1.245	
21/18	1.164	1.168	1.192	1.219	1.211	1.179	1.153	1.151	1.163	1.173	1.170	1.178	1.182	1.187	1.192	1.193	1.192	1.189	1.173	1.170	1.173	
24/21	1.132	1.124	1.149	1.159	1.154	1.125	1.115	1.118	1.127	1.133	1.132	1.137	1.144	1.153	1.154	1.148	1.146	1.146	1.141	1.131	1.143	
27/24	1.096	1.108	1.121	1.128	1.123	1.093	1.090	1.093	1.106	1.107	1.110	1.112	1.119	1.120	1.123	1.122	1.122	1.124	1.111	1.111	1.108	
30/27	1.077	1.088	1.101	1.108	1.103	1.077	1.084	1.087	1.097	1.100	1.100	1.106	1.107	1.111	1.109	1.111	1.111	1.105	1.100	1.092		
33/30	1.065	1.072	1.086	1.089	1.077	1.063	1.071	1.065	1.081	1.083	1.086	1.092	1.094	1.093	1.094	1.090	1.089	1.082	1.082	1.077		
36/33	1.055	1.066	1.069	1.076	1.061	1.055	1.062	1.062	1.071	1.072	1.072	1.077	1.083	1.082	1.078	1.080	1.076	1.071	1.067	1.065		
39/36	1.051	1.059	1.060	1.061	1.049	1.044	1.053	1.056	1.057	1.059	1.061	1.066	1.071	1.066	1.069	1.065	1.064	1.061	1.055	1.054		
42/39	1.044	1.049	1.055	1.054	1.041	1.044	1.049	1.054	1.055	1.058	1.059	1.061	1.068	1.063	1.062	1.057	1.059	1.057	1.048			
45/42	1.039	1.045	1.047	1.044	1.036	1.037	1.040	1.047	1.048	1.049	1.054	1.053	1.056	1.056	1.053	1.051	1.045	1.044	1.042			
48/45	1.035	1.039	1.044	1.037	1.032	1.035	1.037	1.043	1.043	1.046	1.047	1.050	1.051	1.046	1.045	1.046	1.041	1.040	1.038			
51/48	1.030	1.035	1.037	1.034	1.031	1.030	1.033	1.037	1.036	1.036	1.039	1.041	1.043	1.040	1.039	1.038	1.037	1.032	1.031			
54/51	1.031	1.036	1.032	1.027	1.030	1.029	1.034	1.034	1.035	1.035	1.036	1.042	1.038	1.035	1.035	1.034	1.032	1.029				
57/54	1.026	1.030	1.027	1.024	1.024	1.024	1.029	1.031	1.034	1.031	1.033	1.038	1.034	1.034	1.031	1.028	1.026	1.025				
60/57	1.026	1.028	1.026	1.021	1.023	1.026	1.028	1.029	1.028	1.032	1.032	1.035	1.030	1.030	1.030	1.023	1.022	1.021				
63/60	1.023	1.025	1.022	1.019	1.019	1.020	1.024	1.024	1.024	1.024	1.027	1.027	1.026	1.027	1.025	1.021	1.022	1.019				
66/63	1.026	1.021	1.020	1.020	1.018	1.021	1.023	1.024	1.026	1.026	1.029	1.029	1.024	1.028	1.023	1.021	1.018					
69/66	1.021	1.022	1.019	1.018	1.016	1.019	1.021	1.023	1.023	1.021	1.024	1.024	1.022	1.020	1.020	1.017	1.016					
72/69	1.022	1.018	1.016	1.017	1.018	1.016	1.021	1.021	1.022	1.022	1.023	1.021	1.020	1.019	1.016	1.015	1.017					
75/72	1.017	1.016	1.014	1.015	1.015	1.014	1.018	1.020	1.019	1.019	1.018	1.018	1.018	1.015	1.015	1.013	1.014					
78/75	1.018	1.015	1.014	1.015	1.016	1.015	1.016	1.018	1.017	1.022	1.019	1.018	1.017	1.017	1.015	1.013						
81/78	1.015	1.014	1.013	1.014	1.013	1.014	1.018	1.018	1.015	1.019	1.018	1.015	1.015	1.013	1.012	1.011						
84/81	1.013	1.012	1.013	1.012	1.012	1.013	1.016	1.016	1.015	1.018	1.015	1.015	1.015	1.013	1.013	1.010						
87/84	1.013	1.011	1.010	1.012	1.012	1.012	1.014	1.013	1.015	1.017	1.013	1.013	1.011	1.012	1.010	1.008						
90/87	1.013	1.012	1.011	1.013	1.012	1.013	1.015	1.013	1.015	1.013	1.013	1.012	1.011	1.012	1.009							
93/90	1.011	1.010	1.011	1.012	1.011	1.013	1.013	1.012	1.014	1.014	1.013	1.011	1.010	1.009	1.010							
96/93	1.010	1.010	1.008	1.010	1.010	1.009	1.013	1.015	1.016	1.011	1.012	1.010	1.009	1.009	1.009							

Source: WCIRB accident year experience calls

* Paid medical loss development factors include the paid cost of medical cost containment programs (MCCP) for accident years 2011 and prior.

Age	I. Distribution of Pharma Payments by Development Year ⁽¹⁾										II. Difference in Pharma Payment Share Compared to Calendar Year 2018 ⁽²⁾										III. Difference in Pharma Payment Share - Fixed Percentage for 108-Months & Later									
	Calendar Year										Calendar Year										Calendar Year									
	2013	2014	2015	2016	2017	2018	2013	2014	2015	2016	2017	2018	2013	2014	2015	2016	2017	2018	2013	2014	2015	2016	2017	2018	2013	2014	2015	2016	2017	2018
12	5.8%	5.1%	4.1%	3.0%	2.3%	1.3%	4.5%	3.8%	2.8%	1.7%	1.0%	0.0%	4.5%	3.8%	2.8%	1.7%	1.0%	0.0%	4.5%	3.8%	2.8%	1.7%	1.0%	0.0%	4.5%	3.8%	2.8%	1.7%	1.0%	0.0%
24	9.0%	8.8%	6.6%	4.1%	3.2%	1.8%	7.2%	7.0%	4.7%	2.3%	1.3%	0.0%	7.2%	7.0%	4.7%	2.3%	1.3%	0.0%	7.2%	7.0%	4.7%	2.3%	1.3%	0.0%	7.2%	7.0%	4.7%	2.3%	1.3%	0.0%
36	12.3%	11.9%	9.6%	6.2%	5.0%	3.0%	9.3%	8.9%	6.6%	3.2%	2.0%	0.0%	9.3%	8.9%	6.6%	3.2%	2.0%	0.0%	9.3%	8.9%	6.6%	3.2%	2.0%	0.0%	9.3%	8.9%	6.6%	3.2%	2.0%	0.0%
48	14.7%	12.8%	10.4%	7.4%	5.9%	4.1%	10.6%	8.7%	6.3%	3.3%	1.8%	0.0%	10.6%	8.7%	6.3%	3.3%	1.8%	0.0%	10.6%	8.7%	6.3%	3.3%	1.8%	0.0%	10.6%	8.7%	6.3%	3.3%	1.8%	0.0%
60	16.4%	14.9%	11.3%	7.9%	6.4%	4.9%	11.4%	10.0%	6.4%	3.0%	1.5%	0.0%	11.4%	10.0%	6.4%	3.0%	1.5%	0.0%	11.4%	10.0%	6.4%	3.0%	1.5%	0.0%	11.4%	10.0%	6.4%	3.0%	1.5%	0.0%
72	20.0%	16.3%	13.7%	9.2%	7.1%	5.2%	14.8%	11.0%	8.5%	4.0%	1.9%	0.0%	14.8%	11.0%	8.5%	4.0%	1.9%	0.0%	14.8%	11.0%	8.5%	4.0%	1.9%	0.0%	14.8%	11.0%	8.5%	4.0%	1.9%	0.0%
84	22.7%	19.4%	15.0%	11.3%	8.3%	5.1%	17.5%	14.2%	9.8%	6.2%	3.1%	0.0%	17.5%	14.2%	9.8%	6.2%	3.1%	0.0%	17.5%	14.2%	9.8%	6.2%	3.1%	0.0%	17.5%	14.2%	9.8%	6.2%	3.1%	0.0%
96	25.8%	21.8%	17.7%	12.8%	11.1%	6.9%	18.8%	14.9%	10.7%	5.9%	4.1%	0.0%	18.8%	14.9%	10.7%	5.9%	4.1%	0.0%	18.8%	14.9%	10.7%	5.9%	4.1%	0.0%	18.8%	14.9%	10.7%	5.9%	4.1%	0.0%
108	26.9%	24.2%	18.7%	15.0%	10.6%	10.3%	16.6%	13.9%	8.4%	4.7%	0.3%	0.0%	16.6%	13.9%	8.4%	4.7%	0.3%	0.0%	16.6%	13.9%	8.4%	4.7%	0.3%	0.0%	16.6%	13.9%	8.4%	4.7%	0.3%	0.0%
120	29.7%	26.4%	22.2%	15.4%	14.0%	9.3%	20.4%	17.1%	12.9%	6.1%	4.7%	0.0%	20.4%	17.1%	12.9%	6.1%	4.7%	0.0%	20.4%	17.1%	12.9%	6.1%	4.7%	0.0%	20.4%	17.1%	12.9%	6.1%	4.7%	0.0%
132	30.5%	27.9%	22.7%	17.5%	12.9%	11.2%	19.3%	16.7%	11.5%	6.3%	1.7%	0.0%	19.3%	16.7%	11.5%	6.3%	1.7%	0.0%	19.3%	16.7%	11.5%	6.3%	1.7%	0.0%	19.3%	16.7%	11.5%	6.3%	1.7%	0.0%
144	30.7%	27.7%	24.4%	18.4%	15.7%	11.3%	19.4%	16.5%	13.1%	7.1%	4.4%	0.0%	19.4%	16.5%	13.1%	7.1%	4.4%	0.0%	19.4%	16.5%	13.1%	7.1%	4.4%	0.0%	19.4%	16.5%	13.1%	7.1%	4.4%	0.0%
156	35.4%	26.1%	23.7%	19.0%	16.9%	12.8%	22.5%	17.6%	10.8%	6.1%	4.0%	0.0%	22.5%	17.6%	10.8%	6.1%	4.0%	0.0%	22.5%	17.6%	10.8%	6.1%	4.0%	0.0%	22.5%	17.6%	10.8%	6.1%	4.0%	0.0%
168	38.5%	33.2%	22.9%	17.1%	15.7%	15.6%	22.9%	17.6%	7.2%	1.5%	0.1%	0.0%	22.9%	17.6%	7.2%	1.5%	0.1%	0.0%	22.9%	17.6%	7.2%	1.5%	0.1%	0.0%	22.9%	17.6%	7.2%	1.5%	0.1%	0.0%
180	37.5%	37.4%	29.2%	15.6%	13.6%	14.2%	23.3%	23.2%	15.0%	1.5%	-0.6%	0.0%	23.3%	23.2%	15.0%	1.5%	-0.6%	0.0%	23.3%	23.2%	15.0%	1.5%	-0.6%	0.0%	23.3%	23.2%	15.0%	1.5%	-0.6%	0.0%
192	32.2%	34.2%	31.0%	22.5%	12.1%	11.6%	20.7%	22.7%	19.5%	10.9%	0.5%	0.0%	20.7%	22.7%	19.5%	10.9%	0.5%	0.0%	20.7%	22.7%	19.5%	10.9%	0.5%	0.0%	20.7%	22.7%	19.5%	10.9%	0.5%	0.0%
204	37.3%	33.8%	28.2%	22.4%	17.4%	10.7%	26.6%	23.1%	17.5%	11.7%	6.7%	0.0%	26.6%	23.1%	17.5%	11.7%	6.7%	0.0%	26.6%	23.1%	17.5%	11.7%	6.7%	0.0%	26.6%	23.1%	17.5%	11.7%	6.7%	0.0%
216	35.7%	34.6%	27.5%	18.1%	16.8%	16.2%	19.5%	18.3%	11.3%	1.8%	0.6%	0.0%	19.5%	18.3%	11.3%	1.8%	0.6%	0.0%	19.5%	18.3%	11.3%	1.8%	0.6%	0.0%	19.5%	18.3%	11.3%	1.8%	0.6%	0.0%
228	28.1%	36.2%	31.6%	22.8%	16.0%	15.6%	12.6%	20.7%	16.0%	7.2%	0.5%	0.0%	12.6%	20.7%	16.0%	7.2%	0.5%	0.0%	12.6%	20.7%	16.0%	7.2%	0.5%	0.0%	12.6%	20.7%	16.0%	7.2%	0.5%	0.0%
240	38.1%	25.4%	30.1%	27.7%	18.4%	11.8%	26.3%	13.6%	18.3%	15.9%	6.5%	0.0%	26.3%	13.6%	18.3%	15.9%	6.5%	0.0%	26.3%	13.6%	18.3%	15.9%	6.5%	0.0%	26.3%	13.6%	18.3%	15.9%	6.5%	0.0%
252	40.4%	36.6%	20.4%	21.3%	24.5%	15.1%	25.3%	21.5%	5.4%	6.2%	9.4%	0.0%	25.3%	21.5%	5.4%	6.2%	9.4%	0.0%	25.3%	21.5%	5.4%	6.2%	9.4%	0.0%	25.3%	21.5%	5.4%	6.2%	9.4%	0.0%
264	44.0%	41.0%	33.2%	20.7%	16.2%	16.3%	27.7%	24.7%	17.0%	4.4%	-0.1%	0.0%	27.7%	24.7%	17.0%	4.4%	-0.1%	0.0%	27.7%	24.7%	17.0%	4.4%	-0.1%	0.0%	27.7%	24.7%	17.0%	4.4%	-0.1%	0.0%
276	47.6%	31.4%	28.4%	27.2%	16.7%	14.1%	33.5%	17.2%	14.3%	13.0%	2.6%	0.0%	33.5%	17.2%	14.3%	13.0%	2.6%	0.0%	33.5%	17.2%	14.3%	13.0%	2.6%	0.0%	33.5%	17.2%	14.3%	13.0%	2.6%	0.0%
288	38.4%	45.1%	27.1%	14.1%	19.9%	15.0%	23.4%	30.2%	12.1%	-0.9%	4.9%	0.0%	23.4%	30.2%	12.1%	-0.9%	4.9%	0.0%	23.4%	30.2%	12.1%	-0.9%	4.9%	0.0%	23.4%	30.2%	12.1%	-0.9%	4.9%	0.0%
300	26.9%	40.8%	45.0%	20.1%	12.8%	20.3%	6.5%	20.5%	24.6%	-0.3%	-7.5%	0.0%	6.5%	20.5%	24.6%	-0.3%	-7.5%	0.0%	6.5%	20.5%	24.6%	-0.3%	-7.5%	0.0%	6.5%	20.5%	24.6%	-0.3%	-7.5%	0.0%
312	31.0%	27.4%	34.7%	35.5%	16.5%	11.9%	19.1%	15.4%	22.8%	23.6%	4.6%	0.0%	19.1%	15.4%	22.8%	23.6%	4.6%	0.0%	19.1%	15.4%	22.8%	23.6%	4.6%	0.0%	19.1%	15.4%	22.8%	23.6%	4.6%	0.0%
324	29.6%	23.8%	23.9%	32.4%	31.5%	16.2%	13.4%	7.7%	7.7%	16.3%	15.3%	0.0%	13.4%	7.7%	7.7%	16.3%	15.3%	0.0%	13.4%	7.7%	7.7%	16.3%	15.3%	0.0%	13.4%	7.7%	7.7%	16.3%	15.3%	0.0%
336	43.4%	27.6%	22.4%	18.7%	24.8%	23.2%	20.2%	4.5%	-0.8%	-4.4%	1.7%	0.0%	20.2%	4.5%	-0.8%	-4.4%	1.7%	0.0%	20.2%	4.5%	-0.8%	-4.4%	1.7%	0.0%	20.2%	4.5%	-0.8%	-4.4%	1.7%	0.0%
348	37.0%	38.1%	31.1%	16.5%	16.8%	16.7%	20.2%	21.3%	14.3%	-0.2%	0.0%	0.0%	20.2%	21.3%	14.3%	-0.2%	0.0%	0.0%	20.2%	21.3%	14.3%	-0.2%	0.0%	0.0%	20.2%	21.3%	14.3%	-0.2%	0.0%	0.0%
360	31.1%	29.1%	25.8%	18.8%	13.7%	10.8%	20.3%	18.3%	15.0%	8.1%	2.9%	0.0%	20.3%	18.3%	15.0%	8.1%	2.9%	0.0%	20.3%	18.3%	15.0%	8.1%	2.9%	0.0%	20.3%	18.3%	15.0%	8.1%	2.9%	0.0%
372	40.7%	30.2%	27.7%	34.3%	23.0%	10.1%	30.5%	20.0%	17.6%	24.1%	12.8%	0.0%	30.5%	20.0%	17.6%	24.1%	12.8%	0.0%	30.5%	20.0%	17.6%	24.1%	12.8%	0.0%	30.5%	20.0%	17.6%	24.1%	12.8%	0.0%
384		23.1%	42.7%	33.3%	29.9%	33.8%			9.0%	-0.5%	-3.8%	0.0%			9.0%	-0.5%	-3.8%	0.0%			9.0%	-0.5%	-3.8%	0.0%			9.0%	-0.5%	-3.8%	0.0%
396			5.4%	36.3%	34.8%	45.6%			-40.2%	-9.3%	-10.9%	0.0%			-40.2%	-9.3%	-10.9%	0.0%			-40.2%	-9.3%	-10.9%	0.0%			-40.2%	-9.3%	-10.9%	0.0%
408				6.0%	34.6%	35.6%				-29.6%	-1.0%	0.0%				-29.6%	-1.0%	0.0%				-29.6%	-1.0%	0.0%				-29.6%	-1.0%	0.0%
420					3.9%	24.4%					-20.5%	0.0%					-20.5%	0.0%					0.0%						0.0%	0.0%
432						2.1%						0.0%																		0.0%
Total	15.6%	14.0%	11.1%	7.6%	5.9%	4.1%	11.5%	9.9%	6.9%	3.4%	1.7%	0.0%	11.5%	9.9%	6.9%	3.4%	1.7%	0.0%	11.5%	9.9%	6.9%	3.4%	1.7%	0.0%	11.5%	9.9%	6.9%	3.4%	1.7%	0.0%
108+	32.7%	29.8%	24.9%	18.6%	15.1%	12.7%	20.0%	17.1%	12.2%	5.9%	2.4%	0.0%	20.0%	17.1%	12.2%	5.9%	2.4%	0.0%	20.0%	17.1%	12.2%	5.9%	2.4%	0.0%	20.0%	17.1%	12.2%	5.9%	2.4%	0.0%

Notes:

⁽¹⁾ Based on WCIRB medical transaction data.⁽²⁾ For example, the 4.5% for 2013 at 12 months is the difference between the 5.8% for 2013 at 12 months and the 1.3% for 2018 at 12 months from Item I.

Development Age	Difference in Pharma Payment Share for Calendar Years 2012 and Prior Compared to Calendar Year 2018			(C) Difference
	(A)	(B)		
	CY2012&Prior ^[1]	CY2018 ^[2]		
0-12	5.8%	1.3%	4.5%	
0-24	7.5%	1.5%	6.0%	
0-36	8.7%	1.8%	6.9%	
0-48	9.5%	2.1%	7.4%	
0-60	10.1%	2.3%	7.8%	
0-72	10.7%	2.4%	8.3%	
0-84	11.3%	2.5%	8.7%	
0-96	11.7%	2.7%	9.1%	
0-108	12.2%	2.8%	9.3%	
0-120	12.6%	2.9%	9.7%	
0-132	13.1%	3.0%	10.0%	
0-144	13.5%	3.1%	10.4%	
0-156	14.0%	3.2%	10.7%	
0-168	14.3%	3.4%	10.9%	
0-180	14.5%	3.5%	11.1%	
0-192	14.7%	3.5%	11.2%	
0-204	14.9%	3.6%	11.3%	
0-216	15.0%	3.7%	11.3%	
0-228	15.1%	3.8%	11.3%	
0-240	15.2%	3.8%	11.3%	
0-252	15.3%	3.9%	11.4%	
0-264	15.3%	3.9%	11.4%	
0-276	15.4%	4.0%	11.4%	
0-288	15.5%	4.0%	11.5%	
0-300	15.5%	4.0%	11.5%	
0-312	15.5%	4.0%	11.5%	
0-324	15.5%	4.1%	11.5%	
0-336	15.6%	4.1%	11.5%	
0-348	15.6%	4.1%	11.5%	
0-360	15.6%	4.1%	11.5%	
0-372	15.6%	4.1%	11.5%	
0-384	15.6%	4.1%	11.5%	
0-396	15.6%	4.1%	11.5%	
0-408	15.6%	4.1%	11.5%	
0-420	15.6%	4.1%	11.5%	
0-432	15.6%	4.1%	11.5%	

Notes:

^[1] Based on calendar year 2013 from Exhibit 6.1, Item I.^[2] Based on calendar year 2018 from Exhibit 6.1, Item I.

**Developed Loss Ratio Unadjusted 3-Year Average Incurred Development Factors
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident Year	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (b)	Cumulative Development Factor	Developed Loss Ratio (1) x (3)	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (c)	Cumulative Development Factor	Developed Loss Ratio (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.274	1.004	1.026	0.281	0.406	1.003	1.027	0.417	0.698
2009	0.317	1.007	1.033	0.328	0.469	1.004	1.031	0.484	0.812
2010	0.302	1.007	1.040	0.314	0.450	1.005	1.036	0.466	0.780
2011	0.278	1.009	1.049	0.291	0.384	1.007	1.044	0.401	0.692
2012	0.246	1.011	1.061	0.261	0.326	1.009	1.053	0.343	0.604
2013	0.206	1.016	1.078	0.222	0.258	1.012	1.066	0.275	0.498
2014	0.193	1.021	1.100	0.212	0.226	1.013	1.080	0.244	0.456
2015	0.184	1.029	1.132	0.208	0.211	1.023	1.106	0.233	0.441
2016	0.168	1.045	1.183	0.199	0.193	1.030	1.139	0.220	0.419
2017	0.162	1.087	1.286	0.209	0.193	1.052	1.198	0.231	0.440
2018	0.148	1.188	1.528	0.226	0.188	1.103	1.321	0.248	0.474
2019	0.108	1.587	2.426	0.263	0.163	1.267	1.674	0.273	0.536

- (a) Based on Section B, Exhibit 1. Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs. No adjustment has been made to MCCP costs in medical reserves.
- (b) Based on Section B, Exhibit 2.1.
- (c) Based on Section B, Exhibit 2.2.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted 3-Year Average Incurred Development Factors
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.329
2009	0.328	1.347	1.269	0.348
2010	0.314	1.322	1.154	0.359
2011	0.291	1.304	1.054	0.360
2012	0.261	1.287	0.938	0.358
2013	0.222	1.259	0.820	0.341
2014	0.212	1.153	0.756	0.324
2015	0.208	1.137	0.722	0.328
2016	0.199	1.122	0.747	0.299
2017	0.209	1.093	0.783	0.291
2018	0.226	1.065	0.821	0.293
2019	0.263	1.036	0.909	0.299
				Projected (d)
2020				0.282
2021				0.286
11/1/2021				0.287

(a) See Exhibit 7.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted 3-Year Average Incurred Development Factors
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.417	0.802	1.177	0.284
2009	0.484	0.791	1.269	0.302
2010	0.466	0.789	1.154	0.319
2011	0.401	0.811	1.054	0.308
2012	0.343	0.846	0.938	0.310
2013	0.275	0.928	0.820	0.312
2014	0.244	0.974	0.756	0.314
2015	0.233	0.995	0.722	0.321
2016	0.220	0.993	0.747	0.292
2017	0.231	0.991	0.783	0.292
2018	0.248	1.015	0.821	0.307
2019	0.273	1.011	0.909	0.304
				Projected (d)
2020				0.297
2021				0.306
11/1/2021				0.308

(a) See Exhibit 7.1.

(b) Based on Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs. No adjustment has been made to MCCP costs in medical reserves.

**Developed Loss Ratio Unadjusted Latest Year Incurred Development Factors
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident Year	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (b)	Cumulative Development Factor	Developed Loss Ratio (1) x (3)	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (c)	Cumulative Development Factor	Developed Loss Ratio (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.274	1.004	1.026	0.281	0.406	1.003	1.027	0.417	0.698
2009	0.317	1.007	1.033	0.328	0.469	1.004	1.031	0.484	0.812
2010	0.302	1.007	1.040	0.314	0.450	1.005	1.036	0.466	0.780
2011	0.278	1.009	1.049	0.291	0.384	1.007	1.044	0.401	0.692
2012	0.246	1.010	1.060	0.261	0.326	1.009	1.053	0.343	0.604
2013	0.206	1.014	1.075	0.222	0.258	1.015	1.069	0.276	0.498
2014	0.193	1.017	1.093	0.211	0.226	1.010	1.080	0.244	0.455
2015	0.184	1.023	1.118	0.206	0.211	1.022	1.103	0.233	0.438
2016	0.168	1.039	1.162	0.196	0.193	1.027	1.133	0.219	0.414
2017	0.162	1.080	1.254	0.204	0.193	1.042	1.181	0.227	0.431
2018	0.148	1.183	1.484	0.219	0.188	1.098	1.297	0.244	0.463
2019	0.108	1.568	2.327	0.252	0.163	1.253	1.625	0.265	0.517

- (a) Based on Section B, Exhibit 1. Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs. No adjustment has been made to MCCP costs in medical reserves.
- (b) Based on Section B, Exhibit 2.1.
- (c) Based on Section B, Exhibit 2.2.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted Latest Year Incurred Development Factors
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.329
2009	0.328	1.347	1.269	0.348
2010	0.314	1.322	1.154	0.359
2011	0.291	1.304	1.054	0.360
2012	0.261	1.287	0.938	0.358
2013	0.222	1.259	0.820	0.340
2014	0.211	1.153	0.756	0.322
2015	0.206	1.137	0.722	0.324
2016	0.196	1.122	0.747	0.294
2017	0.204	1.093	0.783	0.284
2018	0.219	1.065	0.821	0.285
2019	0.252	1.036	0.909	0.287
				Projected (d)
2020				0.272
2021				0.276
11/1/2021				0.277

(a) See Exhibit 8.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted Latest Year Incurred Development Factors
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.417	0.802	1.177	0.284
2009	0.484	0.791	1.269	0.302
2010	0.466	0.789	1.154	0.319
2011	0.401	0.811	1.054	0.308
2012	0.343	0.846	0.938	0.310
2013	0.276	0.928	0.820	0.312
2014	0.244	0.974	0.756	0.314
2015	0.233	0.995	0.722	0.321
2016	0.219	0.993	0.747	0.291
2017	0.227	0.991	0.783	0.288
2018	0.244	1.015	0.821	0.301
2019	0.265	1.011	0.909	0.295
				Projected (d)
2020				0.290
2021				0.298
11/1/2021				0.301

(a) See Exhibit 8.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs. No adjustment has been made to MCCP costs in medical reserves.

A. Indemnity Case Reserves Per Open Claim

Accident	Evaluated as of (in months)												
Year	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													25,649
2003												35,679	35,730
2004											31,357	33,245	35,090
2005										27,805	28,458	31,554	33,746
2006									26,994	27,481	30,957	32,744	34,400
2007								27,100	29,204	31,360	32,520	36,472	42,123
2008							23,878	26,713	30,551	33,560	36,891	41,290	
2009						21,594	23,512	25,992	28,961	32,174	37,527		
2010					18,225	20,213	22,415	25,251	28,814	31,909			
2011				17,450	18,928	20,810	23,461	26,064	29,337				
2012			14,952	16,363	18,719	21,181	24,855	28,916					
2013		13,078	14,215	15,739	17,677	20,706	24,561						
2014	9,665	13,125	15,214	17,625	20,572	22,577							
2015	10,017	14,245	16,690	19,669	22,154								
2016	10,147	14,596	17,283	20,430									
2017	10,827	16,047	19,535										
2018	11,564	16,827											
2019	12,015												

B. Average Paid Indemnity per Closed Claim

Accident	Evaluated as of (in months)												
Year	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													21,923
2003												21,467	21,958
2004											17,165	17,663	18,083
2005										15,091	15,644	16,096	16,457
2006									15,970	16,738	17,349	17,825	18,227
2007								16,480	17,442	18,240	18,872	19,368	19,826
2008							17,318	18,552	19,442	20,117	20,747	21,305	
2009						16,802	18,488	19,671	20,611	21,422	22,016		
2010					15,155	17,187	18,709	19,812	20,600	21,267			
2011				12,887	15,514	17,297	18,672	19,778	20,496				
2012			10,038	13,266	15,579	17,331	18,590	19,533					
2013		6,318	10,481	13,644	15,851	17,379	18,417						
2014	2,691	6,720	11,149	14,513	16,766	18,242							
2015	3,006	7,359	11,875	15,192	17,256								
2016	3,252	7,699	12,005	15,085									
2017	3,341	7,785	12,017										
2018	3,566	8,204											
2019	3,812												

C. Annual Change of Average Paid Indemnity per Closed Claim

Accident	Evaluated as of (in months)												
Year	15	27	39	51	63	75	87	99	111	123	135	147	159
2002													
2003													0.2%
2004												-17.7%	-17.6%
2005											-8.9%	-8.9%	-9.0%
2006										10.9%	10.9%	10.7%	10.8%
2007									9.2%	9.0%	8.8%	8.7%	8.8%
2008								12.6%	11.5%	10.3%	9.9%	10.0%	
2009							6.8%	6.0%	6.0%	6.5%	6.1%		
2010						2.3%	1.2%	0.7%	-0.1%	-0.7%			
2011					2.4%	0.6%	-0.2%	-0.2%	-0.5%				
2012				2.9%	0.4%	0.2%	-0.4%	-1.2%					
2013			4.4%	2.8%	1.7%	0.3%	-0.9%						
2014		6.4%	6.4%	6.4%	5.8%	5.0%							
2015	11.7%	9.5%	6.5%	4.7%	2.9%								
2016	8.2%	4.6%	1.1%	-0.7%									
2017	2.8%	1.1%	0.1%										
2018	6.7%	5.4%											
2019	6.9%												

Source: Accident year experience of insurers with available claim count data

D. Indemnity Case Reserves per Open Claim Adjusted by Paid Indemnity Severity Trend (a)

Accident	Evaluated as of (in months)												
Year	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													46,578
2003												41,604	46,652
2004											29,257	34,232	38,419
2005										22,642	26,665	31,196	34,966
2006									22,859	25,115	29,571	34,547	38,726
2007								24,396	24,966	27,368	32,167	37,536	42,123
2008							23,095	27,465	27,828	30,185	35,364	41,290	
2009						20,796	24,656	29,122	29,502	32,143	37,527		
2010					19,456	21,272	24,950	29,329	29,485	31,909			
2011				17,453	19,917	21,409	24,900	29,280	29,337				
2012			16,319	17,965	20,000	21,450	24,791	28,916					
2013		12,958	17,038	18,477	20,350	21,510	24,561						
2014	8,483	13,783	18,125	19,654	21,524	22,577							
2015	9,476	15,094	19,305	20,574	22,154								
2016	10,249	15,791	19,515	20,430									
2017	10,532	15,966	19,535										
2018	11,240	16,827											
2019	12,015												

E. Indemnity Open Claim Counts

Accident	Evaluated as of (in months)												
Year	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													6,735
2003												7,331	6,280
2004											7,030	5,946	4,928
2005										7,267	5,964	4,809	3,940
2006									8,769	7,094	5,611	4,538	3,651
2007								10,554	8,159	6,313	4,959	3,975	3,131
2008							12,761	9,569	7,309	5,697	4,399	3,496	
2009						16,209	11,837	8,779	6,601	4,961	3,814		
2010					21,013	15,020	10,735	7,820	5,761	4,323			
2011				28,134	19,781	13,962	9,831	6,917	5,098				
2012			40,886	28,351	19,426	13,246	9,117	6,479					
2013		60,411	42,462	27,996	18,338	12,278	8,340						
2014	80,242	62,676	42,436	27,057	17,483	11,684							
2015	84,707	63,162	40,432	24,801	15,911								
2016	84,017	60,470	37,457	23,010									
2017	82,354	56,653	35,112										
2018	82,936	57,895											
2019	84,878												

F. Total Indemnity Case Reserves Adjusted by Paid Indemnity Severity Trend (in \$000) (b)

Accident	Evaluated as of (in months)												
Year	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													313,712
2003												305,013	292,959
2004											205,672	203,551	189,318
2005										164,538	159,023	150,007	137,759
2006									200,458	178,176	165,936	156,767	141,387
2007								257,469	203,700	172,766	159,502	149,206	131,887
2008							294,726	262,808	203,395	171,969	155,566	144,350	
2009						337,071	291,856	255,649	194,740	159,461	143,126		
2010					408,825	319,502	267,846	229,367	169,866	137,944			
2011				491,020	393,977	298,916	244,787	202,528	149,559				
2012			667,214	509,332	388,522	284,124	226,021	187,350					
2013		782,803	723,471	517,279	373,190	264,096	204,839						
2014	680,679	863,900	769,143	531,766	376,311	263,790							
2015	802,713	953,352	780,556	510,261	352,492								
2016	861,100	954,903	730,982	470,084									
2017	867,321	904,530	685,903										
2018	932,239	974,184											
2019	1,019,838												

- (a) Latest evaluation of each accident year is unadjusted. Evaluations prior to the latest evaluation are determined by adjusting the latest accident year average indemnity case reserves by a different annual change applied at each individual accident year and maturity based on the change in paid losses per closed claim for that age and maturity (Item C)
- (b) Each amount is derived as the product of the indemnity open claim counts (Item E) and the adjusted average indemnity case reserves per open claim (Item D).

Source: Accident year experience of insurers with available claim count data

G. Paid Indemnity Loss on All Claims

Accident Year	Evaluated as of (in months)												
	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													4,692,873
2003												4,430,784	4,476,070
2004										3,062,153	3,105,141	3,139,503	
2005									2,378,508	2,423,839	2,458,017	2,487,864	
2006								2,418,052	2,481,088	2,523,732	2,562,806	2,590,181	
2007							2,490,745	2,571,266	2,636,197	2,681,535	2,723,387	2,759,789	
2008						2,502,016	2,601,299	2,665,621	2,720,324	2,769,556	2,807,577		
2009					2,283,611	2,412,027	2,506,465	2,578,803	2,637,754	2,680,254			
2010				2,167,179	2,342,244	2,466,302	2,554,597	2,616,405	2,670,269				
2011			1,917,499	2,158,789	2,322,631	2,443,568	2,535,460	2,593,487					
2012		1,660,276	2,019,628	2,266,781	2,437,851	2,552,045	2,630,902						
2013	1,201,721	1,789,046	2,174,299	2,414,426	2,566,546	2,664,554							
2014	529,355	1,301,568	1,953,347	2,373,215	2,631,521	2,795,003							
2015	576,423	1,422,578	2,099,117	2,522,498	2,774,496								
2016	610,812	1,467,626	2,141,952	2,543,638									
2017	631,023	1,508,537	2,173,148										
2018	681,051	1,595,883											
2019	720,721												

H. Adjusted Total Indemnity Incurred (in \$000) (c)

Accident Year	Evaluated as of (in months)												
	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													5,006,586
2003												4,735,796	4,769,029
2004										3,267,825	3,308,692	3,328,821	
2005									2,543,046	2,582,862	2,608,024	2,625,623	
2006								2,618,511	2,659,264	2,689,668	2,719,573	2,731,568	
2007							2,748,214	2,774,966	2,808,963	2,841,037	2,872,593	2,891,676	
2008						2,796,742	2,864,107	2,869,016	2,892,293	2,925,122	2,951,927		
2009					2,620,682	2,703,884	2,762,114	2,773,544	2,797,215	2,823,381			
2010				2,576,005	2,661,746	2,734,147	2,783,964	2,786,271	2,808,214				
2011			2,408,520	2,552,765	2,621,547	2,688,355	2,737,987	2,743,046					
2012		2,327,489	2,528,960	2,655,303	2,721,974	2,778,066	2,818,252						
2013	1,984,524	2,512,517	2,691,578	2,787,616	2,830,642	2,869,393							
2014	1,210,034	2,165,468	2,722,489	2,904,981	3,007,832	3,058,793							
2015	1,379,136	2,375,930	2,879,672	3,032,759	3,126,988								
2016	1,471,912	2,422,529	2,872,934	3,013,722									
2017	1,498,343	2,413,067	2,859,051										
2018	1,613,290	2,570,067											
2019	1,740,559												

I. Indemnity Incurred Loss Development Factors Based on Adjusted Total Indemnity Incurred

Accident Year	Age-to-Age Development (in months):											
	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159
2002												
2003												1.007
2004											1.013	1.006
2005										1.016	1.010	1.007
2006									1.016	1.011	1.011	1.004
2007								1.010	1.012	1.011	1.011	1.007
2008							1.024	1.002	1.008	1.011	1.009	
2009						1.032	1.022	1.004	1.009	1.009		
2010					1.033	1.027	1.018	1.001	1.008			
2011				1.060	1.027	1.025	1.018	1.002				
2012			1.087	1.050	1.025	1.021	1.014					
2013		1.266	1.071	1.036	1.015	1.014						
2014	1.790	1.257	1.067	1.035	1.017							
2015	1.723	1.212	1.053	1.031								
2016	1.646	1.186	1.049									
2017	1.610	1.185										
2018	1.593											
Latest Yea	1.593	1.185	1.049	1.031	1.017	1.014	1.014	1.002	1.008	1.009	1.009	1.007
3-Yr Avera	1.616	1.194	1.056	1.034	1.019	1.020	1.017	1.002	1.008	1.011	1.010	1.006

(c) Each amount is the sum of the adjusted total indemnity case reserves (Item F) and the total indemnity paid losses (Item G).

Source: Accident year experience of insurers with available claim count data

J. Indemnity Incurred Loss Development Factors (d)

Accident Year	Age-to-Age Development (in months):											
	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159
2002												
2003												1.002
2004											1.006	1.003
2005										1.005	1.006	1.004
2006									1.008	1.008	1.005	1.002
2007								1.012	1.009	1.003	1.009	1.008
2008							1.018	1.011	1.008	1.007	1.007	
2009						1.022	1.016	1.013	1.010	1.009		
2010					1.038	1.023	1.017	1.011	1.009			
2011				1.052	1.032	1.023	1.016	1.010				
2012			1.093	1.059	1.033	1.022	1.014					
2013		1.201	1.093	1.047	1.030	1.017						
2014	1.628	1.223	1.097	1.050	1.023							
2015	1.630	1.194	1.085	1.039								
2016	1.606	1.187	1.080									
2017	1.588	1.183										
2018	1.567											

K. Impact of Adjustments to Common Case Reserve Level (e)

Accident Year	Age-to-Age Development (in months):											
	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159
2002												
2003												0.53%
2004											0.63%	0.32%
2005										1.06%	0.35%	0.25%
2006									0.75%	0.34%	0.59%	0.28%
2007								-0.21%	0.35%	0.84%	0.21%	-0.15%
2008							0.61%	-0.94%	0.03%	0.43%	0.23%	
2009						1.00%	0.50%	-0.87%	-0.13%	0.01%		
2010					-0.41%	0.40%	0.15%	-1.01%	-0.14%			
2011				0.77%	-0.45%	0.21%	0.29%	-0.81%				
2012			-0.62%	-0.87%	-0.81%	-0.15%	0.02%					
2013		5.39%	-1.98%	-1.11%	-1.41%	-0.35%						
2014	9.94%	2.76%	-2.70%	-1.34%	-0.55%							
2015	5.71%	1.47%	-2.95%	-0.74%								
2016	2.48%	-0.08%	-2.91%									
2017	1.43%	0.19%										
2018	1.66%											

L. Indemnity Incurred Loss Development Factors Adjusted for Changes in Case Reserve Adequacy (f)

Accident Year	Age-to-Age Development (in months):											
	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159
2002												
2003												1.007
2004											1.012	1.006
2005										1.016	1.009	1.007
2006									1.016	1.011	1.011	1.005
2007								1.010	1.012	1.011	1.011	1.007
2008							1.024	1.002	1.008	1.011	1.009	
2009						1.031	1.021	1.004	1.009	1.009		
2010					1.033	1.027	1.019	1.001	1.008			
2011				1.061	1.027	1.026	1.019	1.002				
2012			1.086	1.050	1.025	1.020	1.014					
2013		1.266	1.071	1.035	1.015	1.013						
2014	1.786	1.258	1.067	1.035	1.017							
2015	1.723	1.213	1.053	1.031								
2016	1.646	1.186	1.049									
2017	1.611	1.185										
2018	1.594											
3-Year Average	1.617	1.195	1.056	1.034	1.019	1.020	1.017	1.002	1.008	1.011	1.010	1.006

(d) Development factors are from the same insurer mix as those which have been adjusted for case reserve level adequacy and applied in the calculation of the development factors in Item I.

(e) Each factor represents the change in age-to-age development factors from Item J to those in Item I.

(f) Each factor is the product of [1.0 + the impact of adjustments to common case reserve level (Item K)] and [the incurred indemnity age-to-age development factors from Section B, Exhibit 2.1.1].

Source: Accident year experience of insurers with available claim count data

A. Medical Case Reserves Per Open Indemnity Claim

Accident Year	Evaluated as of (in months)												
	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													92,697
2003												88,010	90,184
2004											80,483	84,303	87,581
2005										74,819	78,386	85,380	92,256
2006									67,165	71,624	78,305	83,616	92,128
2007								62,328	71,972	79,722	89,199	95,034	104,829
2008							53,610	63,114	71,491	78,921	87,748	98,810	
2009						43,675	51,473	59,267	67,053	75,607	91,067		
2010					35,915	41,737	47,918	53,877	64,096	68,649			
2011				32,091	38,616	43,358	49,220	57,110	66,010				
2012			24,989	29,067	34,583	40,826	47,770	58,068					
2013		20,783	23,288	28,080	32,936	39,816	47,123						
2014	16,130	19,249	22,718	27,195	32,564	38,635							
2015	16,512	20,285	25,291	30,834	37,350								
2016	16,976	21,271	26,010	31,254									
2017	17,806	22,570	28,487										
2018	18,860	23,149											
2019	18,590												

B. Average Paid Medical Loss Per Closed Indemnity Claim (a)

Accident Year	Evaluated as of (in months)												
	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													22,308
2003												21,015	21,858
2004											18,518	19,433	20,168
2005										18,334	19,440	20,266	20,927
2006									19,164	20,537	21,642	22,507	23,229
2007								20,364	22,052	23,411	24,507	25,381	26,258
2008							21,175	23,175	24,639	25,761	26,782	27,800	
2009						20,779	23,255	25,071	26,538	27,880	28,848		
2010					18,704	21,510	23,876	25,517	26,773	27,908			
2011				14,662	18,058	20,750	22,796	24,348	25,372				
2012			10,980	14,606	17,545	19,756	21,388	22,645					
2013		6,695	10,912	14,304	16,973	18,828	20,096						
2014	2,989	6,851	10,971	14,384	16,831	18,480							
2015	3,231	7,263	11,333	14,566	16,561								
2016	3,462	7,489	11,315	14,059									
2017	3,565	7,704	11,398										
2018	3,665	7,988											
2019	3,912												

C. Annual Change of Average Paid Medical per Closed Claim (b)

Accident Year	Evaluated as of (in months)												
	15	27	39	51	63	75	87	99	111	123	135	147	159
2002													
2003													-2.0%
2004												-7.5%	-7.7%
2005											5.0%	4.3%	3.8%
2006										12.0%	11.3%	11.1%	11.0%
2007									15.1%	14.0%	13.2%	12.8%	13.0%
2008								13.8%	11.7%	10.0%	9.3%	9.5%	
2009							9.8%	8.2%	7.7%	8.2%	7.7%		
2010						5.1%	4.9%	4.7%	4.4%	4.6%			
2011					3.7%	3.4%	2.9%	2.6%	2.5%				
2012				-2.4%	-3.1%	-3.9%	-4.4%	-4.6%					
2013			-0.6%	-2.1%	-3.3%	-4.7%	-6.0%						
2014		2.3%	0.5%	0.6%	-0.8%	-1.8%							
2015	8.1%	6.0%	3.3%	1.3%	-1.6%								
2016	7.2%	3.1%	-0.2%	-3.5%									
2017	3.0%	2.9%	0.7%										
2018	2.8%	3.7%											
2019	6.7%												

(a) Paid medical per closed claim severities for accident year 2010 and 2011 only reflect the paid cost of medical cost containment programs (MCCP) attributable to policies with effective dates prior to July 1, 2010.

(b) The annual changes for accident year 2010, 2011 and 2012 are based on paid medical per total claim for consistency and do not compare to the severities in item B.

Source: Accident year experience of insurers with available claim count data

D. Medical Case Reserves per Open Claim Adjusted by Paid Medical Severity Trend (c)

Accident Year	Evaluated as of (in months)												
	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													89,061
2003												74,692	87,263
2004											58,457	69,072	80,518
2005										43,142	61,368	72,031	83,546
2006									44,543	48,326	68,320	79,997	92,738
2007							46,055	51,256	55,089	77,364	90,213	104,829	
2008							44,259	52,414	57,270	60,617	84,546	98,810	
2009						39,571	48,607	56,703	61,684	65,604	91,067		
2010					39,370	41,583	51,005	59,343	64,391	68,649			
2011				33,278	40,837	42,985	52,461	60,894	66,010				
2012			27,442	32,470	39,569	41,304	50,154	58,068					
2013		19,403	27,271	31,800	38,279	39,364	47,123						
2014	14,204	19,855	27,419	31,977	37,959	38,635							
2015	15,352	21,050	28,324	32,382	37,350								
2016	16,452	21,703	28,280	31,254									
2017	16,942	22,329	28,487										
2018	17,418	23,149											
2019	18,590												

E. Total Medical Case Reserves Adjusted by Paid Medical Severity Trend (in \$000) (d)

Accident Year	Evaluated as of (in months)												
	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													599,842
2003												547,588	547,983
2004											410,937	410,723	396,770
2005										313,502	365,986	346,365	329,159
2006									390,613	342,849	383,368	363,010	338,585
2007								486,050	418,199	347,755	383,612	358,597	328,220
2008							564,814	501,540	418,584	345,347	371,918	345,441	
2009						641,390	575,371	497,779	407,177	325,464	347,328		
2010					827,259	624,566	547,544	464,091	370,954	296,768			
2011				936,250	807,785	600,173	515,723	421,203	336,517				
2012			1,121,994	920,567	768,671	547,123	457,258	376,220					
2013		1,172,157	1,158,014	890,262	701,971	483,305	393,009						
2014	1,139,734	1,244,463	1,163,529	865,201	663,644	451,416							
2015	1,300,383	1,329,582	1,145,224	803,096	594,279								
2016	1,382,249	1,312,373	1,059,290	719,159									
2017	1,395,262	1,264,979	1,000,252										
2018	1,444,565	1,340,212											
2019	1,577,887												

F. Paid Medical Loss on All Claims

Accident Year	Evaluated as of (in months)												
	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>	<u>99</u>	<u>111</u>	<u>123</u>	<u>135</u>	<u>147</u>	<u>159</u>
2001													
2002													5,249,631
2003												4,802,885	4,888,211
2004											3,769,827	3,853,608	3,919,962
2005										3,338,869	3,434,805	3,503,674	3,563,719
2006									3,397,735	3,506,591	3,588,093	3,654,162	3,708,368
2007								3,575,454	3,711,036	3,816,388	3,895,775	3,971,332	4,032,297
2008							3,516,300	3,682,739	3,804,202	3,895,131	3,968,061	4,027,882	
2009						3,227,583	3,427,497	3,571,636	3,675,980	3,759,619	3,825,777		
2010					3,045,049	3,308,376	3,507,161	3,642,892	3,738,917	3,832,402			
2011				2,534,277	2,870,664	3,112,755	3,286,765	3,410,488	3,500,134				
2012			2,108,864	2,549,433	2,869,403	3,085,667	3,240,587	3,354,491					
2013		1,545,451	2,146,505	2,583,513	2,867,688	3,060,989	3,191,171						
2014	827,710	1,601,959	2,217,831	2,647,250	2,923,887	3,118,811							
2015	865,225	1,691,718	2,298,960	2,723,512	2,986,014								
2016	931,452	1,747,652	2,340,941	2,734,748									
2017	985,875	1,812,175	2,391,939										
2018	1,039,739	1,923,159											
2019	1,042,845												

(c) Latest evaluation of each accident year is unadjusted. Evaluations prior to the latest evaluation are determined by adjusting the latest accident year average medical case reserves by a different annual change applied at each individual accident year and maturity based on the change in paid losses per closed claim for that age and maturity (Item C)

(d) Each amount is derived as the product of the indemnity open claim counts (Exhibit 9.2, Item E) and the adjusted average medical case reserves per open claim (Item D).

Source: Accident year experience of insurers with available claim count data

G. Adjusted Total Medical Incurred (in \$000) (e)

Accident Year	Evaluated as of (in months)												
	15	27	39	51	63	75	87	99	111	123	135	147	159
2001													
2002													5,849,473
2003												5,350,473	5,436,194
2004											4,180,764	4,264,331	4,316,731
2005										3,652,371	3,800,792	3,850,039	3,892,878
2006									3,788,348	3,849,440	3,971,462	4,017,172	4,046,953
2007								4,061,504	4,129,235	4,164,143	4,279,386	4,329,929	4,360,517
2008							4,081,114	4,184,279	4,222,786	4,240,478	4,339,980	4,373,323	
2009						3,868,972	4,002,868	4,069,415	4,083,156	4,085,082	4,173,105		
2010					3,872,308	3,932,941	4,054,705	4,106,983	4,109,871	4,129,170			
2011				3,470,527	3,678,449	3,712,928	3,802,489	3,831,691	3,836,651				
2012			3,230,859	3,470,000	3,638,075	3,632,790	3,697,845	3,730,711					
2013		2,717,607	3,304,519	3,473,776	3,569,659	3,544,294	3,584,181						
2014	1,967,444	2,846,422	3,381,360	3,512,450	3,587,532	3,570,227							
2015	2,165,607	3,021,300	3,444,184	3,526,608	3,580,293								
2016	2,313,701	3,060,025	3,400,231	3,453,907									
2017	2,381,137	3,077,153	3,392,192										
2018	2,484,304	3,263,371											
2019	2,620,731												

H. Medical Incurred Loss Development Factors Based on Adjusted Total Medical Incurred

Accident Year	Age-to-Age Development (in months):											
	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159
2002												
2003												1.016
2004											1.020	1.012
2005										1.041	1.013	1.011
2006									1.016	1.032	1.012	1.007
2007								1.017	1.008	1.028	1.012	1.007
2008							1.025	1.009	1.004	1.023	1.008	
2009						1.035	1.017	1.003	1.000	1.022		
2010					1.016	1.031	1.013	1.001	1.005			
2011				1.060	1.009	1.024	1.008	1.001				
2012			1.074	1.048	0.999	1.018	1.009					
2013		1.216	1.051	1.028	0.993	1.011						
2014	1.447	1.188	1.039	1.021	0.995							
2015	1.395	1.140	1.024	1.015								
2016	1.323	1.111	1.016									
2017	1.292	1.102										
2018	1.314											
Latest Year	1.314	1.102	1.016	1.015	0.995	1.011	1.009	1.001	1.005	1.022	1.008	1.007
3-Yr Average	1.309	1.118	1.026	1.021	0.996	1.018	1.010	1.002	1.003	1.024	1.010	1.009

I. Medical Incurred Loss Development Factors (f)

Accident Year	Age-to-Age Development (in months):											
	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159
2002												
2003												1.001
2004											1.004	0.999
2005										1.005	1.003	1.003
2006									1.007	1.003	1.002	1.003
2007								1.015	1.005	1.004	1.003	1.003
2008							1.021	1.009	1.004	1.002	1.004	
2009						1.026	1.014	1.007	1.004	1.009		
2010					1.036	1.022	1.011	1.011	1.005			
2011				1.057	1.023	1.014	1.009	1.008				
2012			1.078	1.050	1.024	1.014	1.015					
2013		1.119	1.075	1.030	1.023	1.010						
2014	1.323	1.133	1.063	1.033	1.022							
2015	1.313	1.117	1.050	1.026								
2016	1.287	1.093	1.042									
2017	1.260	1.098										
2018	1.253											

(e) Each amount is the sum of the adjusted total medical case reserves (Item E) and the total medical paid losses (Item F).

(f) Development factors are from the same insurer mix as those which have been adjusted for case reserve level adequacy and applied in the calculation of the development factors in Item H.

Source: Accident year experience of insurers with available claim count data

J. Impact of Adjustments to Common Case Reserve Level (g)

Accident	Age-to-Age Development (in months):											
Year	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159
2002												
2003												1.48%
2004											1.55%	1.31%
2005										3.54%	0.99%	0.78%
2006									0.90%	2.84%	1.00%	0.46%
2007								0.13%	0.35%	2.33%	0.92%	0.44%
2008							0.47%	-0.01%	0.00%	2.13%	0.32%	
2009						0.86%	0.29%	-0.31%	-0.34%	1.21%		
2010					-1.93%	0.88%	0.23%	-1.00%	-0.04%			
2011				0.23%	-1.33%	0.99%	-0.16%	-0.68%				
2012			-0.33%	-0.12%	-2.49%	0.42%	-0.59%					
2013		8.63%	-2.19%	-0.26%	-2.90%	0.16%						
2014	9.32%	4.85%	-2.30%	-1.08%	-2.63%							
2015	6.24%	2.03%	-2.50%	-1.09%								
2016	2.78%	1.69%	-2.50%									
2017	2.53%	0.44%										
2018	4.82%											

K. Medical Incurred Loss Development Factors Adjusted for Changes in Case Reserve Adequacy (h)

Accident	Age-to-Age Development (in months):											
Year	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159
2002												
2003												1.016
2004											1.020	1.012
2005										1.041	1.013	1.011
2006									1.016	1.032	1.012	1.008
2007								1.016	1.008	1.027	1.012	1.007
2008							1.025	1.009	1.004	1.023	1.007	
2009						1.034	1.017	1.004	1.001	1.021		
2010					1.016	1.032	1.013	1.001	1.005			
2011				1.061	1.012	1.026	1.009	1.002				
2012			1.074	1.050	0.999	1.018	1.009					
2013		1.216	1.053	1.028	0.993	1.012						
2014	1.448	1.190	1.040	1.022	0.995							
2015	1.395	1.140	1.024	1.016								
2016	1.323	1.111	1.016									
2017	1.292	1.103										
2018	1.313											
3-Year Average	1.309	1.118	1.026	1.022	0.996	1.019	1.011	1.002	1.003	1.024	1.011	1.009

(g) Each factor represents the change in age-to-age development factors from Item I to those in Item H.

(h) Each factor is the product of [1.0 + the impact of adjustments to common case reserve level (Item J)] and [the incurred Medical age-to-age development factors from Section B, Exhibit 2.2.1].

Source: Accident year experience of insurers with available claim count data

**Developed Loss Ratio 3-Year Average Incurred Development Factors
Adjusted for Changes in Average Case Reserve Levels
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident Year	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (b)	Cumulative Development Factor	Developed Loss Ratio (1) x (3)	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (c)	Cumulative Development Factor	Developed Loss Ratio (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.274	1.006	1.029	0.282	0.406	1.009	1.033	0.419	0.701
2009	0.317	1.010	1.039	0.330	0.469	1.011	1.044	0.490	0.820
2010	0.302	1.011	1.050	0.317	0.450	1.024	1.069	0.481	0.798
2011	0.278	1.008	1.059	0.294	0.384	1.003	1.072	0.411	0.705
2012	0.246	1.002	1.061	0.261	0.326	1.002	1.075	0.350	0.612
2013	0.206	1.017	1.080	0.223	0.258	1.011	1.086	0.280	0.503
2014	0.193	1.020	1.101	0.212	0.226	1.019	1.106	0.250	0.462
2015	0.184	1.019	1.122	0.207	0.211	0.996	1.102	0.232	0.439
2016	0.168	1.034	1.160	0.195	0.193	1.022	1.126	0.217	0.413
2017	0.162	1.056	1.226	0.199	0.193	1.026	1.156	0.223	0.421
2018	0.148	1.194	1.464	0.217	0.188	1.118	1.292	0.243	0.459
2019	0.108	1.616	2.366	0.256	0.163	1.309	1.692	0.276	0.532

- (a) Based on Section B, Exhibit 1. Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs. No adjustment has been made to MCCP costs in medical reserves.
- (b) Age-to-age factors for developing accident years 2008 to 2019 were adjusted for changes in indemnity case reserve levels based on 3-year average selections (see Exhibit 9.4, Item L).
- (c) Age-to-age factors for developing accident years 2008 to 2019 were adjusted for changes in medical case reserve levels based on 3-year average selections (see Exhibit 9.8, Item K).

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Using 3-Year Average Incurred Development Factors
Adjusted for Changes in Average Case Reserve Levels
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.282	1.374	1.177	0.329
2009	0.330	1.347	1.269	0.350
2010	0.317	1.322	1.154	0.363
2011	0.294	1.304	1.054	0.364
2012	0.261	1.287	0.938	0.359
2013	0.223	1.259	0.820	0.342
2014	0.212	1.153	0.756	0.324
2015	0.207	1.137	0.722	0.325
2016	0.195	1.122	0.747	0.294
2017	0.199	1.093	0.783	0.278
2018	0.217	1.065	0.821	0.281
2019	0.256	1.036	0.909	0.292
				Projected (d)
2020				0.272
2021				0.276
11/1/2021				0.277

(a) See Exhibit 9.9.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using 3-Year Average Incurred Development Factors
Adjusted for Changes in Average Case Reserve Levels
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.802	1.177	0.286
2009	0.490	0.791	1.269	0.305
2010	0.481	0.789	1.154	0.329
2011	0.411	0.811	1.054	0.316
2012	0.350	0.846	0.938	0.316
2013	0.280	0.928	0.820	0.317
2014	0.250	0.974	0.756	0.322
2015	0.232	0.995	0.722	0.320
2016	0.217	0.993	0.747	0.289
2017	0.223	0.991	0.783	0.282
2018	0.243	1.015	0.821	0.300
2019	0.276	1.011	0.909	0.307
				Projected (d)
2020				0.295
2021				0.304
11/1/2021				0.306

(a) See Exhibit 9.9.

(b) Based on Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs. No adjustment has been made to MCCP costs in medical reserves.

**Developed Loss Ratio Using Latest Year Incurred Loss Development Factors
Adjusted for Insurer Mix
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident Year	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor	Cumulative Development Factor (b)	Developed Loss Ratio (c) (1) x (3)	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor	Cumulative Development Factor (d)	Developed Loss Ratio (c) (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.274	--	1.014	0.278	0.406	--	1.017	0.413	0.691
2009	0.317	--	1.033	0.328	0.469	--	1.027	0.482	0.810
2010	0.302	--	1.052	0.317	0.450	--	1.044	0.470	0.787
2011	0.278	--	1.057	0.293	0.384	--	1.037	0.398	0.692
2012	0.246	--	1.065	0.262	0.326	--	1.045	0.340	0.603
2013	0.206	--	1.074	0.222	0.258	--	1.057	0.273	0.495
2014	0.193	--	1.096	0.211	0.226	--	1.068	0.241	0.453
2015	0.184	--	1.115	0.205	0.211	--	1.089	0.230	0.435
2016	0.168	--	1.165	0.196	0.193	--	1.119	0.216	0.412
2017	0.162	--	1.251	0.203	0.193	--	1.159	0.223	0.426
2018	0.148	--	1.479	0.219	0.188	--	1.270	0.239	0.457
2019	0.108	--	2.300	0.249	0.163	--	1.581	0.258	0.507

- (a) Based on Section B, Exhibit 1. Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs. No adjustment has been made to MCCP costs in medical reserves.
- (b) Column (4) divided by Column (1).
- (c) Developed loss ratios were derived by averaging the loss ratios developed using the latest year incurred methodology for State Compensation Insurance Fund and the remaining insurers collectively, weighted by calendar year 2019 earned premium at the advisory pure premium rate level.
- (d) Column (8) divided by Column (5).

Projected On-Level Accident Year Indemnity Loss to Industry Average Filed Pure Premium Ratios Using Unadjusted Incurred Development Factors Adjusted for Insurer Mix Based on Experience as of March 31, 2020				
Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.278	1.374	1.177	0.325
2009	0.328	1.347	1.269	0.348
2010	0.317	1.322	1.154	0.364
2011	0.293	1.304	1.054	0.363
2012	0.262	1.287	0.938	0.360
2013	0.222	1.259	0.820	0.340
2014	0.211	1.153	0.756	0.323
2015	0.205	1.137	0.722	0.323
2016	0.196	1.122	0.747	0.295
2017	0.203	1.093	0.783	0.284
2018	0.219	1.065	0.821	0.284
2019	0.249	1.036	0.909	0.284
				Projected (d)
2020				0.270
2021				0.274
11/1/2021				0.275

(a) See Exhibit 10.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted Incurred Development Factors
Adjusted for Insurer Mix
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.413	0.802	1.177	0.282
2009	0.482	0.791	1.269	0.301
2010	0.470	0.789	1.154	0.321
2011	0.398	0.811	1.054	0.306
2012	0.340	0.846	0.938	0.307
2013	0.273	0.928	0.820	0.309
2014	0.241	0.974	0.756	0.311
2015	0.230	0.995	0.722	0.317
2016	0.216	0.993	0.747	0.287
2017	0.223	0.991	0.783	0.283
2018	0.239	1.015	0.821	0.295
2019	0.258	1.011	0.909	0.287
				Projected (d)
2020				0.283
2021				0.291
11/1/2021				0.294

(a) See Exhibit 10.1.

(b) Based on Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs. No adjustment has been made to MCCP costs in medical reserves.

**Developed Loss Ratio Unadjusted 3-Year Average Paid Development Factors
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident	Reported	Annual	Cumulative	Developed	Reported	Annual	Cumulative	Developed	Total
Year	<u>Loss Ratio (a)</u>	<u>Factor (b)</u>	<u>Factor</u>	<u>Loss Ratio</u>	<u>Loss Ratio (a)</u>	<u>Factor (c)</u>	<u>Factor</u>	<u>Loss Ratio</u>	<u>Loss Ratio</u>
				(1) x (3)				(5) x (7)	(4) + (8)
2008	0.261	1.012	1.076	0.281	0.374	1.016	1.211	0.453	0.733
2009	0.301	1.015	1.092	0.329	0.430	1.017	1.232	0.530	0.859
2010	0.287	1.017	1.110	0.319	0.418	1.019	1.255	0.525	0.844
2011	0.263	1.022	1.135	0.298	0.350	1.024	1.285	0.450	0.749
2012	0.230	1.025	1.163	0.268	0.294	1.027	1.321	0.388	0.656
2013	0.192	1.035	1.204	0.231	0.230	1.037	1.370	0.316	0.547
2014	0.176	1.046	1.259	0.222	0.197	1.050	1.438	0.284	0.506
2015	0.163	1.067	1.343	0.219	0.176	1.070	1.539	0.271	0.490
2016	0.142	1.107	1.487	0.211	0.153	1.105	1.700	0.260	0.471
2017	0.123	1.202	1.786	0.220	0.136	1.182	2.010	0.273	0.494
2018	0.092	1.459	2.606	0.239	0.111	1.339	2.692	0.298	0.538
2019	0.045	2.379	6.200	0.278	0.065	1.854	4.992	0.324	0.603

- (a) Based on Section B, Exhibit 1. Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs.
- (b) Age-to-age factors are selected as three-year averages based on Section B, Exhibit 2.5.
- (c) Age-to-age factors are selected as three-year averages based on Section B, Exhibit 2.6. These factors have not been adjusted for any reforms.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted 3-Year Average Paid Development Factors
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.268	1.287	0.938	0.367
2013	0.231	1.259	0.820	0.355
2014	0.222	1.153	0.756	0.339
2015	0.219	1.137	0.722	0.346
2016	0.211	1.122	0.747	0.318
2017	0.220	1.093	0.783	0.308
2018	0.239	1.065	0.821	0.310
2019	0.278	1.036	0.909	0.317
				Projected (d)
2020				0.298
2021				0.303
11/1/2021				0.304

(a) See Exhibit 11.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted 3-Year Average Paid Development Factors
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.453	0.802	1.177	0.309
2009	0.530	0.791	1.269	0.330
2010	0.525	0.789	1.154	0.359
2011	0.450	0.811	1.054	0.346
2012	0.388	0.846	0.938	0.350
2013	0.316	0.928	0.820	0.357
2014	0.284	0.974	0.756	0.366
2015	0.271	0.995	0.722	0.373
2016	0.260	0.993	0.747	0.346
2017	0.273	0.991	0.783	0.346
2018	0.298	1.015	0.821	0.369
2019	0.324	1.011	0.909	0.361
				Projected (d)
2020				0.355
2021				0.365
11/1/2021				0.368

(a) See Exhibit 11.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Developed Loss Ratio Unadjusted Latest Year Paid Development Factors
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident Year	Reported Paid Loss Ratio (a)	Annual Development Factor (b)	Cumulative Development Factor	Developed Loss Ratio (1) x (3)	Reported Paid Loss Ratio (a)	Annual Development Factor (c)	Cumulative Development Factor	Developed Loss Ratio (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.261	1.012	1.076	0.281	0.374	1.016	1.211	0.453	0.733
2009	0.301	1.015	1.092	0.329	0.430	1.017	1.232	0.530	0.859
2010	0.287	1.017	1.110	0.319	0.418	1.019	1.255	0.525	0.844
2011	0.263	1.022	1.135	0.298	0.350	1.024	1.285	0.450	0.749
2012	0.230	1.023	1.161	0.267	0.294	1.026	1.319	0.387	0.654
2013	0.192	1.031	1.197	0.230	0.230	1.036	1.366	0.315	0.544
2014	0.176	1.038	1.242	0.219	0.197	1.043	1.425	0.281	0.500
2015	0.163	1.062	1.319	0.216	0.176	1.067	1.521	0.267	0.483
2016	0.142	1.100	1.451	0.206	0.153	1.097	1.668	0.255	0.461
2017	0.123	1.188	1.724	0.213	0.136	1.168	1.948	0.265	0.477
2018	0.092	1.441	2.484	0.228	0.111	1.320	2.572	0.285	0.513
2019	0.045	2.345	5.825	0.261	0.065	1.849	4.755	0.309	0.570

- (a) Based on Section B, Exhibit 1. Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs.
- (b) Age-to-age factors are selected as latest year for the 15-to-27 month through 99-to-111 month factors and three-year average for the subsequent age-to-age factors based on Section B, Exhibit 2.5.
- (c) Age-to-age factors are selected as latest year for the 15-to-27 month through 99-to-111 month factors and three-year average for the subsequent age-to-age factors based on Section B, Exhibit 2.6.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted Latest Year Paid Development Factors
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.267	1.287	0.938	0.366
2013	0.230	1.259	0.820	0.352
2014	0.219	1.153	0.756	0.334
2015	0.216	1.137	0.722	0.339
2016	0.206	1.122	0.747	0.310
2017	0.213	1.093	0.783	0.297
2018	0.228	1.065	0.821	0.296
2019	0.261	1.036	0.909	0.298
				Projected (d)
2020				0.282
2021				0.286
11/1/2021				0.287

(a) See Exhibit 12.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted Latest Year Paid Development Factors
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.453	0.802	1.177	0.309
2009	0.530	0.791	1.269	0.330
2010	0.525	0.789	1.154	0.359
2011	0.450	0.811	1.054	0.346
2012	0.387	0.846	0.938	0.349
2013	0.315	0.928	0.820	0.356
2014	0.281	0.974	0.756	0.362
2015	0.267	0.995	0.722	0.369
2016	0.255	0.993	0.747	0.339
2017	0.265	0.991	0.783	0.335
2018	0.285	1.015	0.821	0.352
2019	0.309	1.011	0.909	0.344
				Projected (d)
2020				0.338
2021				0.348
11/1/2021				0.351

(a) See Exhibit 12.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Developed Loss Ratios Adjusted for the Impact of Reforms
Based on Paid Latest Year Selections
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)
		Medical		
		Adjusted		
Accident Year	Paid Loss Ratio (a)	Development Factors		Developed Loss Ratio
		<u>Annual (b)</u>	<u>Cumulative (b)</u>	<u>(1) x (3)</u>
2008	0.343	1.017	1.225	0.419
2009	0.397	1.019	1.248	0.496
2010	0.388	1.020	1.274	0.494
2011	0.328	1.026	1.307	0.429
2012	0.278	1.029	1.345	0.373
2013	0.220	1.039	1.397	0.307
2014	0.192	1.039	1.451	0.278
2015	0.173	1.062	1.540	0.266
2016	0.152	1.088	1.676	0.254
2017	0.135	1.155	1.936	0.262
2018	0.111	1.321	2.558	0.283
2019	0.065	1.849	4.730	0.307

- (a) Based on Section B, Exhibit 1. Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs.
- (b) Based on Section B, Exhibit 2.6.1 and includes adjustments for SB 1160 and pharmaceutical costs. Does not reflect any adjustment for changes in claim settlement rates.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Adjusted for the Impact of Reforms
Based on Paid Latest Year Selections**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.836	1.177	0.298
2009	0.496	0.825	1.269	0.322
2010	0.494	0.822	1.154	0.352
2011	0.429	0.836	1.054	0.340
2012	0.373	0.874	0.938	0.348
2013	0.307	0.949	0.820	0.356
2014	0.278	0.993	0.756	0.365
2015	0.266	1.011	0.722	0.373
2016	0.254	1.012	0.747	0.344
2017	0.262	1.014	0.783	0.340
2018	0.283	1.015	0.821	0.350
2019	0.307	1.011	0.909	0.342
				Projected (d)
2020				0.336
2021				0.346
11/1/2021				0.349

(a) See Exhibit 13.1.

(b) Based on Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

Developed Loss Ratios Adjusted for the Impact of Reforms and Changes in Claim Settlement Rates
Based on 3-Year Average Selections
Based on Experience as of March 31, 2020

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Indemnity				Medical					
					Adjusted					
Accident	Reported	Annual	Cumulative	Developed	Paid	Paid	Annual	Cumulative	Developed	Total
Year	Loss Ratio (a)	Factor (b)	Factor	Loss Ratio	Loss Ratio (a)	Loss Ratio (c)	Factor (d)	Factor	Loss Ratio	Loss Ratio
				(1) x (3)					(6) x (8)	(4) + (9)
2008	0.261	1.012	1.076	0.281	0.374	0.343	1.017	1.225	0.419	0.700
2009	0.301	1.015	1.092	0.329	0.430	0.397	1.019	1.248	0.496	0.825
2010	0.287	1.017	1.110	0.319	0.418	0.388	1.020	1.274	0.494	0.812
2011	0.263	1.022	1.135	0.298	0.350	0.328	1.026	1.307	0.429	0.727
2012	0.230	1.023	1.161	0.267	0.294	0.278	1.029	1.345	0.373	0.640
2013	0.192	1.031	1.197	0.230	0.230	0.220	1.039	1.397	0.307	0.537
2014	0.176	1.038	1.242	0.219	0.197	0.192	1.039	1.451	0.278	0.497
2015	0.163	1.052	1.306	0.213	0.176	0.173	1.053	1.528	0.264	0.478
2016	0.142	1.090	1.423	0.202	0.153	0.152	1.084	1.657	0.251	0.453
2017	0.123	1.179	1.678	0.207	0.136	0.135	1.157	1.916	0.260	0.467
2018	0.092	1.453	2.438	0.224	0.111	0.111	1.343	2.574	0.285	0.509
2019	0.045	2.380	5.804	0.261	0.065	0.065	1.862	4.792	0.311	0.572

- (a) Based on Section B, Exhibit 1. Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs.
- (b) Age-to-age factors for developing accident years 2015 to 2019 were adjusted for changes in claim settlement rates based on 3-year average selections (see Section B, Exhibit 2.5.8, Item Q).
- (c) See Section B, Exhibit 3.2, Column (2).
- (d) Based on Section B, Exhibits 2.6.1 and includes adjustments for reforms. Age-to-age factors for developing accident years 2015 to 2019 were adjusted for changes in claim settlement rates based on 3-year average selections (see Section B, Exhibit 2.6.8, Item R).

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Adjusted for the Impact of Reforms and Changes in Claim Settlement Rates
Based on 3-Year Average Selections
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.267	1.287	0.938	0.366
2013	0.230	1.259	0.820	0.352
2014	0.219	1.153	0.756	0.334
2015	0.213	1.137	0.722	0.336
2016	0.202	1.122	0.747	0.304
2017	0.207	1.093	0.783	0.289
2018	0.224	1.065	0.821	0.290
2019	0.261	1.036	0.909	0.297
				Projected (d)
2020				0.279
2021				0.283
11/1/2021				0.284

(a) See Exhibit 14.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Adjusted for the Impact of Reforms and Changes in Claim Settlement Rates
Based on 3-Year Average Selections
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.836	1.177	0.298
2009	0.496	0.825	1.269	0.322
2010	0.494	0.822	1.154	0.352
2011	0.429	0.836	1.054	0.340
2012	0.373	0.874	0.938	0.348
2013	0.307	0.949	0.820	0.356
2014	0.278	0.993	0.756	0.365
2015	0.264	1.011	0.722	0.370
2016	0.251	1.012	0.747	0.340
2017	0.260	1.014	0.783	0.336
2018	0.285	1.015	0.821	0.353
2019	0.311	1.011	0.909	0.346
				Projected (d)
2020				0.340
2021				0.350
11/1/2021				0.353

(a) See Exhibit 14.1.

(b) Based on Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Developed Loss Ratios Using Latest Year Paid Development Factors
Adjusted for Changes in Claim Settlement Rates and Reforms with Incurred Tail
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Indemnity				Medical					
					Adjusted					
Accident	Reported	Annual	Cumulative	Developed	Paid	Paid	Annual	Cumulative	Developed	Total
Year	Loss Ratio (a)	Factor (b)	Factor	Loss Ratio	Loss Ratio (a)	Loss Ratio (c)	Factor (d)	Factor	Loss Ratio	Developed
				(1) x (3)					(6) x (8)	(4) + (9)
2008	0.261	1.012	1.090	0.284	0.374	0.343	1.017	1.229	0.421	0.705
2009	0.301	1.015	1.106	0.333	0.430	0.397	1.019	1.253	0.498	0.831
2010	0.287	1.017	1.125	0.323	0.418	0.388	1.020	1.278	0.496	0.818
2011	0.263	1.022	1.149	0.302	0.350	0.328	1.026	1.312	0.431	0.733
2012	0.230	1.023	1.176	0.271	0.294	0.278	1.029	1.350	0.375	0.645
2013	0.192	1.031	1.212	0.232	0.230	0.220	1.039	1.402	0.308	0.541
2014	0.176	1.038	1.258	0.222	0.197	0.192	1.039	1.456	0.279	0.501
2015	0.163	1.051	1.322	0.216	0.176	0.173	1.051	1.530	0.265	0.481
2016	0.142	1.088	1.438	0.204	0.153	0.152	1.079	1.651	0.250	0.455
2017	0.123	1.174	1.689	0.208	0.136	0.135	1.146	1.893	0.256	0.465
2018	0.092	1.441	2.433	0.224	0.111	0.111	1.321	2.500	0.277	0.501
2019	0.045	2.345	5.706	0.256	0.065	0.065	1.849	4.623	0.300	0.556

- (a) Based on Section B, Exhibit 1. Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs.
- (b) Age-to-age factors for developing accident years 2015 to 2019 were adjusted for changes in claim settlement rates based on latest year selections (see Section B, Exhibit 2.5.8, Item Q). Age-to-age factors for 2007 and prior are based on Section B, Exhibit 2.1. Includes incurred development applied after 267 months.
- (c) See Section B, Exhibit 3.2, Column (2).
- (d) Based on Section B, Exhibits 2.6.1 and includes adjustments for SB 1160. Age-to-age factors for developing accident years 2015 to 2019 were adjusted for changes in claim settlement rates based on latest year selections (see Section B, Exhibit 2.6.8, Item R). Age-to-age factors for 2007 and prior are based on Section B, Exhibit 2.2. Includes incurred development applied after 267 months.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Using Latest Year Paid Development Factors
Adjusted for Changes in Claim Settlement Rates and Reforms with Incurred Tail
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.284	1.374	1.177	0.332
2009	0.333	1.347	1.269	0.354
2010	0.323	1.322	1.154	0.370
2011	0.302	1.304	1.054	0.374
2012	0.271	1.287	0.938	0.371
2013	0.232	1.259	0.820	0.357
2014	0.222	1.153	0.756	0.339
2015	0.216	1.137	0.722	0.340
2016	0.204	1.122	0.747	0.307
2017	0.208	1.093	0.783	0.291
2018	0.224	1.065	0.821	0.290
2019	0.256	1.036	0.909	0.292
				Projected (d)
2020				0.276
2021				0.281
11/1/2021				0.282

(a) See Exhibit 15.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Latest Year Paid Development Factors
Adjusted for Changes in Claim Settlement Rates and Reforms with Incurred Tail
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.421	0.836	1.177	0.299
2009	0.498	0.825	1.269	0.323
2010	0.496	0.822	1.154	0.353
2011	0.431	0.836	1.054	0.342
2012	0.375	0.874	0.938	0.349
2013	0.308	0.949	0.820	0.357
2014	0.279	0.993	0.756	0.367
2015	0.265	1.011	0.722	0.371
2016	0.250	1.012	0.747	0.339
2017	0.256	1.014	0.783	0.332
2018	0.277	1.015	0.821	0.343
2019	0.300	1.011	0.909	0.334
				Projected (d)
2020				0.329
2021				0.339
11/1/2021				0.341

(a) See Exhibit 15.1.

(b) Based on Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Developed Loss Ratio Using Latest Year Paid Loss Development Factors
Adjusted for Insurer Mix
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Indemnity				Medical			
Accident Year	Paid Loss Ratio (a)	Annual Development Factor	Cumulative Development Factor (b)	Developed Loss Ratio (c) (1) x (3)	Paid Loss Ratio (a)	Annual Development Factor	Cumulative Development Factor (d)	Developed Loss Ratio (c) (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.261	--	1.070	0.279	0.374	--	1.189	0.445	0.724
2009	0.301	--	1.093	0.329	0.430	--	1.215	0.523	0.852
2010	0.287	--	1.121	0.322	0.418	--	1.243	0.520	0.842
2011	0.263	--	1.136	0.298	0.350	--	1.257	0.440	0.739
2012	0.230	--	1.157	0.266	0.294	--	1.289	0.379	0.645
2013	0.192	--	1.188	0.228	0.230	--	1.329	0.306	0.534
2014	0.176	--	1.237	0.218	0.197	--	1.388	0.274	0.492
2015	0.163	--	1.307	0.214	0.176	--	1.474	0.259	0.473
2016	0.142	--	1.440	0.205	0.153	--	1.617	0.247	0.452
2017	0.123	--	1.705	0.210	0.136	--	1.885	0.256	0.466
2018	0.092	--	2.457	0.226	0.111	--	2.488	0.276	0.501
2019	0.045	--	5.760	0.259	0.065	--	4.601	0.299	0.557

- (a) Based on Section B, Exhibit 1. Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs. No adjustment has been made to MCCP costs in medical reserves.
- (b) Column (4) divided by Column (1).
- (c) Developed loss ratios were derived by averaging the loss ratios developed using the latest year paid methodology (with long-term incurred development) for State Compensation Insurance Fund and the remaining insurers collectively, weighted by calendar year 2019 earned premium at the advisory pure premium rate level.
- (d) Column (8) divided by Column (5).

Projected On-Level Accident Year Indemnity Loss to Industry Average Filed Pure Premium Ratios Using Unadjusted Paid Development Factors Adjusted for Insurer Mix Based on Experience as of March 31, 2020				
Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.279	1.374	1.177	0.326
2009	0.329	1.347	1.269	0.350
2010	0.322	1.322	1.154	0.368
2011	0.298	1.304	1.054	0.369
2012	0.266	1.287	0.938	0.365
2013	0.228	1.259	0.820	0.350
2014	0.218	1.153	0.756	0.333
2015	0.214	1.137	0.722	0.336
2016	0.205	1.122	0.747	0.308
2017	0.210	1.093	0.783	0.294
2018	0.226	1.065	0.821	0.293
2019	0.259	1.036	0.909	0.295
				Projected (d)
2020				0.279
2021				0.283
11/1/2021				0.284

(a) See Exhibit 16.1.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted Paid Development Factors
Adjusted for Insurer Mix
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.445	0.802	1.177	0.303
2009	0.523	0.791	1.269	0.326
2010	0.520	0.789	1.154	0.355
2011	0.440	0.811	1.054	0.339
2012	0.379	0.846	0.938	0.341
2013	0.306	0.928	0.820	0.346
2014	0.274	0.974	0.756	0.353
2015	0.259	0.995	0.722	0.358
2016	0.247	0.993	0.747	0.329
2017	0.256	0.991	0.783	0.324
2018	0.276	1.015	0.821	0.341
2019	0.299	1.011	0.909	0.332
				Projected (d)
2020				0.327
2021				0.337
11/1/2021				0.340

(a) See Exhibit 16.1.

(b) Based on Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs. No adjustment has been made to MCCP costs in medical reserves.

**Projected Indemnity Loss Ratio Using the Bornhuetter-Ferguson (BF) Paid Development Method
Accident Year 2019 Indemnity Projected from 15 Months to 27 Months**

1. AY 2019 Reported Paid Indemnity Loss Ratio at 15 Months (Based on Exhibit 1 of Section B)	0.045
2. Reported Paid Indemnity Loss Ratios at 27 Months for ELR	
a) AY 2017 (Based on March 31, 2019 Experience)	0.086
b) AY 2018 (Based on Exhibit 1 of Section B)	0.092
3. Frequency Adjustments to AY 2019 (Based on Appendix B, Exhibit 1)	
a) AY 2017-2018 Frequency Change	-1.5%
b) AY 2018-2019 Frequency Change	0.9%
4. Average Indemnity Severity Change, AY 2013-2018 (Based on Exhibit 6.2 of Section B)	-2.2%
5. Composite Indemnity On-Level Adjustment Factors (Based on Exhibit 4.1 of Section B)	
a) AY 2017 to Current	1.093
b) AY 2018 to Current	1.065
c) AY 2019 to Current	1.036
6. Composite Premium On-Level Adjustment Factors (Based on Exhibit 5.2 of Section B)	
a) AY 2017 to Current	0.783
b) AY 2018 to Current	0.821
c) AY 2019 to Current	0.909
7. AY 2019 Expected Paid Indemnity Loss Ratio at 27 Months	
a) Projected from 2017 = $(2a) \times [1 + (3a)] \times [1 + (3b)] \times [1 + (4)]^2 \times [(5a) / (5c)] / [(6a) / (6c)]$	0.100
b) Projected from 2018 = $(2b) \times [1 + (3b)] \times [1 + (4)] \times [(5b) / (5c)] / [(6b) / (6c)]$	0.103
c) Average of 2017 and 2018 Projections = $[(7a) + (7b)] / 2$	0.102
8. Projected Indemnity 15-to-27 Paid Development Factor (Based on Exhibit 2.5.1 of Section B)	2.345
9. Projected AY 2019 Paid Indemnity Loss Ratio at 27 Months = $(1) + (7c) \times [1 - 1 / (8)]$	0.103

**Projected Medical Loss Ratio Using the Bornhuetter-Ferguson (BF) Paid Development Method
Accident Year 2019 Medical Projected from 15 Months to 27 Months**

	Adjusted for Reforms (*)
1. AY 2019 Reported Paid Medical Loss Ratio at 15 Months (Based on Exhibit 1 of Section B)	0.065
2. Reported Paid Medical Loss Ratios at 27 Months for ELR	
a) AY 2017 (Based on March 31, 2019 Experience)	0.103
b) AY 2018 (Based on Exhibit 1 of Section B)	0.111
3. Frequency Adjustments to AY 2019 (Based on Appendix B, Exhibit 1)	
a) AY 2017-2018 Frequency Change	-1.5%
b) AY 2018-2019 Frequency Change	0.9%
4. Average Medical Severity Change, AY 2013-2018 (Based on Exhibit 6.4 of Section B)	-0.2%
5. Composite Medical On-Level Adjustment Factors (Based on Exhibit 4.4 of Section B)	
a) AY 2017 to Current	1.014
b) AY 2018 to Current	1.015
c) AY 2019 to Current	1.011
6. Composite Premium On-Level Adjustment Factors (Based on Exhibit 5.2 of Section B)	
a) AY 2017 to Current	0.783
b) AY 2018 to Current	0.821
c) AY 2019 to Current	0.909
7. AY 2019 Expected Paid Medical Loss Ratio at 27 Months	
a) Projected from 2017 = $(2a) \times [1 + (3a)] \times [1 + (3b)] \times [1 + (4)]^2 \times [(5a) / (5c)] / [(6a) / (6c)]$	0.118
b) Projected from 2018 = $(2b) \times [1 + (3b)] \times [1 + (4)] \times [(5b) / (5c)] / [(6b) / (6c)]$	0.124
c) Average of 2017 and 2018 Projections = $[(7a) + (7b)] / 2$	0.121
8. Projected Medical 15-to-27 Paid Development Factor (Based on Exhibit 2.6.1 of Section B)	1.849
9. Projected AY 2019 Paid Medical Loss Ratio at 27 Months = $(1) + (7c) \times [1 - 1 / (8)]$	0.121

(*) Based on experience evaluated as of March 31, 2020. Reflects adjustments for SB 1160 and impact of pharmaceutical cost reductions.

**Developed Loss Ratios Using Latest Year Reform Adjusted Development Factors - BF Adjusted Age 15 Loss Ratio
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
	Reported	Annual	Cumulative			Adjusted			Total
Accident	Paid	Development	Development	Developed	Paid	Annual	Cumulative	Developed	Developed
<u>Year</u>	<u>Loss Ratio (a)</u>	<u>Factor (b)</u>	<u>Factor</u>	<u>Loss Ratio</u>	<u>Loss Ratio (a)</u>	<u>Factor (d)</u>	<u>Factor</u>	<u>Loss Ratio</u>	<u>Loss Ratio</u>
				(1) x (3)				(5) x (7)	(4) + (8)
2008	0.261	1.012	1.076	0.281	0.374	1.017	1.225	0.458	0.739
2009	0.301	1.015	1.092	0.329	0.430	1.019	1.248	0.537	0.866
2010	0.287	1.017	1.110	0.319	0.418	1.020	1.274	0.533	0.851
2011	0.263	1.022	1.135	0.298	0.350	1.026	1.307	0.458	0.756
2012	0.230	1.023	1.161	0.267	0.294	1.029	1.345	0.395	0.662
2013	0.192	1.031	1.197	0.230	0.230	1.039	1.397	0.322	0.551
2014	0.176	1.038	1.242	0.219	0.197	1.039	1.451	0.286	0.506
2015	0.163	1.051	1.305	0.213	0.176	1.051	1.525	0.268	0.481
2016	0.142	1.088	1.420	0.202	0.153	1.079	1.645	0.251	0.453
2017	0.123	1.174	1.667	0.206	0.136	1.146	1.886	0.256	0.462
2018	0.092	1.441	2.402	0.221	0.111	1.321	2.491	0.276	0.497
2019	0.103		2.402	0.248	0.121		2.491	0.300	0.548

- (a) Based on Section B, Exhibit 1. The 2019 indemnity loss ratio is based on Exhibit 17.1.
- (b) Age-to-age factors are selected as latest year for the 15-to-27 month through 99-to-111 month factors and three-year average for the subsequent age-to-age factors based on Section B, Exhibit 2.5. Includes adjustments for claim settlement rates.
- (c) Based on experience evaluated as of March 31, 2020. Reflects adjustments of SB 1160 and impact of pharmaceutical cost reductions. The 2019 medical loss ratio is based on Exhibit 17.2.
- (d) Age-to-age factors are selected as latest year for for the 15-to-27 month through 99-to-111 month factors and three-year average for the subsequent age-to-age factors based on Section B, Exhibit 2.6. Reflects an adjustment for SB 1160 and impact of pharmaceutical cost reductions. Includes adjustments for claim settlement rates.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Paid Selections Adjusted for Reform Impacts with BF Paid Applied through 27 Months
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)
Accident Year	Developed Indemnity Loss Ratio (a)	Composite Indemnity Adjustment Factor (b)	Composite Premium Adjustment Factor (c)	On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.267	1.287	0.938	0.366
2013	0.230	1.259	0.820	0.352
2014	0.219	1.153	0.756	0.334
2015	0.213	1.137	0.722	0.336
2016	0.202	1.122	0.747	0.303
2017	0.206	1.093	0.783	0.287
2018	0.221	1.065	0.821	0.286
2019	0.248	1.036	0.909	0.282
				Projected (d)
2020				0.270
2021				0.274
11/1/2021				0.275

(a) See Exhibit 17.3.

(b) Based on Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Paid Selections Adjusted for Reform Impacts with BF Paid Applied through 27 Months
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)
Accident Year	Developed Medical Loss Ratio (a)	Composite Medical Adjustment Factor (b)	Composite Premium Adjustment Factor (c)	On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.458	0.836	1.177	0.325
2009	0.537	0.825	1.269	0.349
2010	0.533	0.822	1.154	0.379
2011	0.458	0.836	1.054	0.363
2012	0.395	0.874	0.938	0.368
2013	0.322	0.949	0.820	0.373
2014	0.286	0.993	0.756	0.376
2015	0.268	1.011	0.722	0.376
2016	0.251	1.012	0.747	0.341
2017	0.256	1.014	0.783	0.332
2018	0.276	1.015	0.821	0.341
2019	0.300	1.011	0.909	0.334
				Projected (d)
2020				0.328
2021				0.338
11/1/2021				0.341

(a) See Exhibit 17.3.

(b) Based on Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency trend for accident year 2019 from Appendix B, Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

Section B

Appendix B

Trending Methodology

The pure premium rates effective January 1, 2021 are intended to reflect the final, or ultimate, cost of losses and loss adjustment expenses on all accidents that arise on policies incepting between January 1, 2021 and August 31, 2021. Appendix A discusses the process of developing the losses reported for each historical accident year as of March 31, 2020 to an ultimate cost basis. This Appendix discusses the process of adjusting and trending these historical accident year costs to the levels anticipated on claims covered by policies incepting between January 1, 2021 and August 31, 2021.

Trending historical costs to the January 1, 2021 to August 31, 2021 policy period level involves three phases. First, the losses incurred during each historical accident year are adjusted for specific, quantifiable cost level changes that have occurred since that time. Second, each year's historical earned premium is adjusted to the premium that would have been earned at the industry average filed pure premium rate level as of July 1, 2020 and at the average wages expected to be in effect during the time the premium on policies incepting between January 1, 2021 and August 31, 2021 is earned. Third, future changes in these adjusted cost levels are projected, or trended, from the time of the latest available experience to November 1, 2021, which is the approximate midpoint of the experience period during which the pure premium rates for January 1, 2021 to August 31, 2021 policies will apply.

Adjustment of Losses to an On-Level Basis

Section B, Exhibits 4.1 through 4.4 show the adjustment of historical loss amounts to a consistent, or on-level cost basis. Section B, Exhibit 4.1 details the on-leveling adjustments to indemnity losses. Section B, Exhibits 4.2 through 4.4 detail the on-leveling adjustments to medical losses.

On-Level Adjustments to Indemnity Losses

For each historical accident year, losses are adjusted to reflect the cost impact of legislative and regulatory changes and judicial action. These adjustments reflect changes in statutory benefit amounts, measurable structural reforms that have been enacted by the legislature, regulatory changes, and the impact of judicial action. The adjustments made to each year's indemnity losses to reflect these changes are shown in Section B, Exhibit 4.1.

Section B, Exhibit 4.1, columns 1 and 2 show the estimated impact of statutory benefit changes, regulatory changes, and judicial action on indemnity claim severity (column 1) and claim frequency (column 2). The adjustments for the impact of these changes on claim severity are based on the WCIRB's model used to assess the cost impact of statutory changes on indemnity benefits based on underlying distributions of claims by injury type, benefit type and injured worker weekly wages.¹ These adjustments reflect WCIRB prospective estimates of each change as well as further refinements from WCIRB reassessments based on more current data emerging subsequent to the occurrence of the legislative, regulatory or judicial action. The estimates of the impact of benefit changes on claim frequency are based on a WCIRB econometric analysis of the effect of a number of economic, demographic, and claims-related variables on the frequency of indemnity claims in California.²

Senate Bill No. 863 (SB 863) increased permanent disability benefits effective January 1, 2013 and January 1, 2014 and provided for a number of structural reforms to the California workers' compensation benefit delivery system. The on-leveling adjustments shown in Section B, Exhibit 4.1 reflect the estimated impact of the measurable components of SB 863 related to indemnity benefits based on the WCIRB's

¹ See Item AC13-12-02 of the December 4, 2013 WCIRB Actuarial Committee Agenda for a more complete discussion of the WCIRB's legislative evaluation model.

² Brooks, Ward, "California Workers Compensation Benefit Utilization – A Study of Changes in Frequency and Severity in Response to Changes in Statutory Workers Compensation Benefit Levels," *Proceedings of the Casualty Actuarial Society*, Volume LXXXVI, 1999, pp. 80-262.

most recent cost evaluations of SB 863.³ In addition to the measurable components of SB 863 related to permanent disability benefits, provisions of SB 863 related to independent medical review, independent bill review, medical provider network strengthening, and others have reduced the duration of claims which also affects indemnity cost levels. Based on the WCIRB's latest retrospective evaluation of SB 863, the WCIRB estimates a total 4.5% decrease in indemnity costs from these factors, which is distributed uniformly over accident years 2012 through 2015 (i.e., 1.25% per year), as shown in column 1 of Section B, Exhibit 4.1. These adjustments are consistent with those reflected in the January 1, 2020 Pure Premium Rate Filing.

Statutory benefits are expressed as a percentage of an injured worker's weekly wage with specified minimum and maximum amounts. Consequently, as wages increase, the cost of indemnity benefits will also increase even without a statutory benefit change. Column 3 of Section B, Exhibit 4.1 shows the estimated annual impact of wage inflation on indemnity benefits. These estimates have been computed based on the pre-injury weekly wages of injured workers, the legislatively scheduled benefits for each year, and the estimated annual changes in average California wages as shown in Section B, Exhibit 5.1.⁴ For accident years with available WCIRB unit statistical data (2017 and prior), these estimates are based on the actual claims and wage inflation data for these years while the estimates for accident years 2018 and subsequent are based on the WCIRB's legislative evaluation model updated with the latest available data.⁵

On-Level Adjustments to Medical Losses

Section B, Exhibits 4.2 through 4.4 show the adjustment of medical losses to an on-level basis. Section B, Exhibit 4.2 shows the impact of non-legislative factors on medical costs. For many years, the Official Medical Fee Schedule (OMFS) has regulated the amounts paid to physicians for many workers' compensation medical procedures. As of April 1, 1999, many inpatient hospital procedures became subject to the Inpatient Hospital Fee Schedule (IHFS). Other medical cost components, such as pharmaceuticals and outpatient facility fees, later also became subject to fee schedules with the enactment of Senate Bill No. 228 (SB 228) effective January 1, 2004. As shown in Section B, Exhibit 4.2, column 1, approximately 90% of medical costs are now directly or indirectly⁶ subject to fee schedules. Column 3 of Section B, Exhibit 4.2 shows the average impact of fee schedule changes on total medical costs by accident year.

The impacts shown in column 3 of Section B, Exhibit 4.2 are primarily based on the WCIRB's cost analysis of the fee schedule changes developed at the time the schedule was implemented. A number of California medical fee schedules are updated regularly by the Division of Workers' Compensation (DWC) to reflect inflationary changes to the underlying Medicare fees on which the fee schedules are based. These updates have generally been modest and relatively consistent over time. As a result, the WCIRB has typically not reflected these updates in the on-leveling of medical losses and instead has considered them a component of the residual "on-level" medical severity trend. However, the WCIRB reviews these updates when they are adopted to determine if any atypical and significant changes should be explicitly reflected in the medical on-level adjustments. In 2020, the DWC adopted several updates to medical fee schedules related to the COVID-19 pandemic in addition to regular updates. A WCIRB review of these updates found that these changes should not significantly and atypically impact overall medical cost levels and, as a result, did not reflect them in the medical on-level adjustments included in Section B, Exhibit 4.2.

Some workers' compensation medical costs are not subject to fee schedules. The portion of each historical accident year's medical losses that is not subject to fee schedules is adjusted to reflect the

³ See *Senate Bill No. 863 WCIRB Cost Monitoring Report – 2016 Retrospective Evaluation*, WCIRB, November 2016 and *Research Brief – SB 863 Cost Monitoring Update*, WCIRB, October 2019 for the WCIRB's most recent retrospective cost evaluations of SB 863.

⁴ This wage inflation adjustment approach is discussed in greater detail later in this Appendix with respect to premium adjustments.

⁵ See Item AC19-03-03 of the March 18, 2019 WCIRB Actuarial Committee Agenda for more information on these adjustments.

⁶ Payments made directly to injured workers as part of claim settlements are assumed to be indirectly affected by existing medical fee schedules.

anticipated general medical cost level during the period in which the proposed pure premium rates will be in effect. The cost adjustments used in this analysis are shown in column 4 of Section B, Exhibit 4.2. The historical values are based on the “Medical Care” component of the Consumer Price Index as published by the U.S. Bureau of Labor Statistics and the California Department of Finance. Projected values are based on the average of California Department of Finance forecasts of medical inflation for the Los Angeles and San Francisco regions. Section B, Exhibit 4.2, column 6 shows the combined impact of fee schedule changes and general medical inflation on non-fee schedule regulated medical cost components by accident year.

Legislative changes and judicial actions also impact the cost of medical benefits. Section B, Exhibit 4.3 shows the impact of these changes or actions on medical costs. The factors in column 1 of Section B, Exhibit 4.3 reflect the impact on the average medical costs per claim of legislative, regulatory, or judicial action not otherwise reflected. These adjustment factors include the WCIRB’s estimated impact of SB 863 on overall medical cost levels (-17%),⁷ offset by the estimated impact already reflected in the WCIRB’s adjustments to loss development for recent pharmaceutical cost declines (-4%),⁸ and distributed over accident years 2011 to 2015, which is consistent with the adjustment reflected in the January 1, 2020 Pure Premium Rate Filing.

Senate Bill No. 1160 (SB 1160) and Assembly Bill No. 1244 (AB 1244), which took effect in 2017, included a number of provisions related to lien filings. The WCIRB’s most recent retrospective evaluation of SB 1160 and AB 1244 suggests that lien filings decreased by approximately 60% compared to the level experienced shortly before the enactment of SB 1160 and AB 1244, resulting in an approximate 3.6% reduction in medical costs.⁹ Given that the impact of SB 1160 and AB 1244 for more recent accident years is substantially reflected in the adjustments to loss development discussed in Appendix A, only the portion of the reform impact not reflected in projected loss development is adjusted for in the factors shown in column 1 of Section B, Exhibit 4.3. These adjustment factors are based on the estimated proportion of ultimate medical losses paid prior to January 1, 2017 for each accident year.

SB 1160 also included provisions restricting the use of utilization review for medical services provided within the first 30 days from the date of injury beginning January 1, 2018, with some exceptions. The WCIRB’s most recent retrospective evaluation of SB 1160 shows some evidence of additional medical treatment being provided within the first 30 days of an injury for 2018 injuries, particularly for physical therapy services.¹⁰ As a result and given that the reforms are substantially reflected in the emerging experience for accident year 2018, the WCIRB has reflected the estimated impact of 0.3% on medical costs in column 1 of Section B, Exhibit 4.3 to on-level 2017 and prior accident years.

The Medical Treatment Utilization Schedule Drug Formulary (Formulary) was adopted by the DWC effective in 2018 pursuant to Assembly Bill No. 1124. The WCIRB’s most recent retrospective evaluation of the Formulary shows that pharmaceutical costs declined in 2018 at an approximate 10% greater rate than the rate of decline experienced shortly before the effective date of the Formulary.¹¹ As a result and given that the reforms are substantially reflected in the emerging experience, the WCIRB has reflected the estimated impact of -0.6% on medical costs in column 1 of Section B, Exhibit 4.3 to on-level 2017 and prior accident years.¹²

The factors shown in column 2 of Section B, Exhibit 4.3 reflect the impact on medical costs of the changes in the frequency of indemnity claims as a result of statutory benefit changes. The combined impact of legislative changes on overall medical costs is shown in column 3 of Section B, Exhibit 4.3.

⁷ See *Senate Bill No. 863 WCIRB Cost Monitoring Report – 2016 Retrospective Evaluation*, WCIRB, November 17, 2016.

⁸ See Appendix A for the discussion of the adjustment to loss development for recent pharmaceutical cost declines.

⁹ See Item AC18-03-03 of the March 18, 2019 WCIRB Actuarial Committee Agenda.

¹⁰ See Item AC17-12-02 of the August 1, 2019 WCIRB Actuarial Committee Agenda.

¹¹ See Item AC17-12-02 of the August 1, 2019 WCIRB Actuarial Committee Agenda.

¹² Combined with the impact of the SB 1160 changes to utilization review, this results in a total on-level adjustment of -0.3% for 2018 shown in column 1 of Section B, Exhibit 4.3.

Section B, Exhibit 4.4 shows the combined impact of both measurable legislative and non-legislative changes on medical costs. Column 4 of Section B, Exhibit 4.4 shows the medical on-level factor that is used to adjust each historical accident year's estimated ultimate medical losses to an on-level basis.

Adjustments of Premium to an On-Level Basis

The primary adjustments made to each year's historical premium to convert those premiums to an on-level basis are as follows:

1. **Wage Inflation.** Workers' compensation rates are expressed as a percentage of payroll. Thus, the earned premium for a particular year reflects the wages paid by California employers during that year. In order for the proposed pure premium rates to provide for losses and loss adjustment expenses arising from January 1, 2021 to August 31, 2021 policies, each historical year's earned premium is adjusted to the anticipated average wage level applicable to this policy period. Section B, Exhibit 5.1 shows the computation of the wage level adjustment factors. The estimated changes in annual California wages shown in Section B, Exhibit 5.1 for 2019 and later are based on an average of those produced by the UCLA Anderson School of Business¹³ (as of March 2020) and the California Department of Finance¹⁴ (as of April 2020).¹⁵ A 2018 WCIRB analysis of the wage forecast methodology showed that blending these two wage forecasts significantly improves the accuracy and reduces the volatility of the wage level projection.¹⁶

The COVID-19 pandemic has resulted in a sudden and significant slowdown in the California economy. Although the average wage change forecasts shown in Exhibit 5.1 reflect some of the impacts of the recent slowdown, they may not fully reflect the impact on the average wage level of the typical California worker. During a recession, the mix of industries can shift significantly and the loss of lower wage, less experienced employees tends to drive measures of average wages artificially upward. In particular for the recent economic downturn, the reductions in employment levels have been greatest in the hospitality and entertainment industries which tend to have lower-than-average wages. This year, the WCIRB reviewed the potential impact of the sudden and significant shift in the mix of industries on average wage levels.¹⁷ Although the study found that the shifts in industrial mix are expected to have an impact on average wage levels that is much greater than the typical year-to-year change, given the uncertainty in forecasting economic data during the rapidly evolving crisis, the WCIRB did not reflect an additional adjustment for this shift.

To more accurately reflect the wage level change for the "typical" California worker, the WCIRB reviewed Bureau of Labor Statistics Occupation Employment Statistics data which includes information on average and median wages. The data showed that, during the Great Recession, median wages grew at a rate of approximately 0.8% less per year compared to growth in average wages. As a result, since growth in median wages is more consistent with the wage increase of the "typical" worker, the WCIRB judgmentally reduced the average wage level change for 2020 by 0.8% to reflect the shift in the mix of employments resulting from the recent economic slowdown for the purposes of projecting the expected wage level underlying January 1, 2021 to August 31, 2021 policies. (This adjustment is also reflected in the adjustment to indemnity benefits for the impact of changes in average wages shown in Section B, Exhibit 4.1.)

2. **Changes in Average Rate Level.** The amount of premium generated during a particular year is based on the rates charged by insurers during that year. Section B, Exhibit 5.2, columns 2a, 2b, and 2c show the adjustment of each year's historical premium to the level reflected in the industry average

¹³ The index is based on the ratio of total statewide wages and salaries divided by total civilian employment.

¹⁴ The California Department of Finance produces an economic forecast in April and November of each year to assist in preparation of the California state budget.

¹⁵ Due to a data anomaly in the 2019 wage change forecast by the UCLA Anderson School of Business, only the California Department of Finance forecast was used to project the 2019 wage change.

¹⁶ See Item AC17-12-03 of the March 19, 2018 WCIRB Actuarial Committee Agenda.

¹⁷ See Item AC20-08-04 of the August 4, 2020 WCIRB Actuarial Committee Agenda.

filed pure premium rates as of July 1, 2020. The earned premium amounts shown in Section B, Exhibit 1 and reflected in the loss ratios shown in Section B, Exhibits 3.1 and 3.2 are based on the final rates charged by insurers—including the impact of most rating plan adjustments such as schedule rating.¹⁸ To compute the indicated difference from the industry average filed pure premium rate as of July 1, 2020, the premium generated for each year at the industry average charged rates is adjusted to reflect the premium that would have been generated had the industry average filed pure premium rates as of July 1, 2020 been charged during that year.

Column 2a of Section B, Exhibit 5.2 shows the ratio of the industry average charged rate to the advisory pure premium rate for each calendar year subsequent to the implementation of competitive rating in 1995. Column 2b of Section B, Exhibit 5.2 shows the factors needed to adjust the earned premium for each calendar year to the industry average filed pure premium rate level as of July 1, 2020. The factors reflect both the historical changes in advisory pure premium rates that are needed to adjust each year's earned premium to the January 1, 2020 advisory pure premium rate level and an additional factor to adjust from the January 1, 2020 advisory pure premium rate level to the industry average filed pure premium rate level as of July 1, 2020. Column 2c of Section B, Exhibit 5.2 shows the combined effect of all these rate adjustments, which are the factors needed to adjust each year's earned premium to the premium that would have been earned had the industry average filed pure premium rates as of July 1, 2020 been charged during that year.

3. **Additional Premium Adjustments.** In addition to adjustments for changes in wage and rate levels, historical premiums are also adjusted to remove the impact of surcharge premium generated under the Minimum Rate Law through 1995, reflect changes in the average experience modification, and reflect the current experience rating off-balance correction factor. These adjustments, which are shown in columns 3, 4, and 5 of Section B, Exhibit 5.2, are based on the WCIRB's unit statistical and experience rating data.
4. **Adjustment for Impact of Audit Premiums on Calendar Years 2007 through 2010.** Premium is reported to the WCIRB on a calendar year basis, reflecting all premiums earned during that calendar year on policies from any year, while losses are reported on an accident year basis, reflecting the cost of claims on policies in force during that year. Generally, these two bases overlap to a considerable degree. However, when audits on older policy years have a highly atypical effect on premiums booked during the current year, the use of unadjusted calendar year earned premium can distort accident year loss ratios. The Great Recession of 2008-2009 significantly impacted audit premiums on 2007 and 2008 policies that were booked in 2009. To adjust for the distortions created by the Great Recession, premiums earned in calendar years 2007 through 2010 are adjusted to an estimated "accident year" basis. These adjustments, which are shown in column 6 of Section B, Exhibit 5.2, are computed based on a comparison of premium reported on a calendar year basis to premium reported on an estimated ultimate policy year basis over the course of two accident years.¹⁹ Since the impact of audit premiums on other years is not believed to be large, no similar adjustment factor is applied to those years.

The sudden and significant economic slowdown in 2020 resulting from the COVID-19 pandemic will significantly impact premiums earned in calendar year 2020 and audits on 2019 and 2020 policies reflected in calendar year 2021 and 2022 earned premiums. However, the projections reflected in this Filing are based on premiums earned in 2019 and prior calendar years, which are prior to the onset of the pandemic.

Section B, Exhibit 5.2, column 7 shows the combined on-level factor for each year that reflects the impact of all the premium adjustments applied by the WCIRB.

Trending Methodology – Diagnostic Indicators

To assess the validity of the assumptions underlying the various trending methodologies, the WCIRB

¹⁸ These premiums do not reflect the impact of deductible credits, retrospective rating plan adjustments or terrorism charges.

¹⁹ See Item AC11-06-02 of the June 3, 2011 and August 3, 2011 WCIRB Actuarial Committee Agendas for a more complete discussion of this computation.

reviews a number of diagnostic indicators. Among the key indicators of the trending methodology reviewed are the following:

1. Indemnity Claim Frequency Changes. Exhibit 1 shows changes in indemnity claim frequency as of March 31, 2020 based on the ratio of indemnity claim counts to unit statistical reported exposure adjusted to a common wage level for accident years 1996 through 2018, and to annual statewide employment for accident year 2019. After a period of steady decline, indemnity claim frequency increased sharply in 2010 and again in 2012. The WCIRB has published several studies of the frequency changes during this period which have also been discussed in prior pure premium rate filings.²⁰ From 2015 to 2018, frequency declined modestly at rates on average generally consistent with those forecast by the WCIRB's econometric indemnity claim frequency model. Indemnity claim frequency based on the preliminary measure of changes in reported claim counts compared to changes in statewide employment levels shows a modest increase for 2019. Claim frequency for 2020, which is discussed below, will be significantly impacted by the COVID-19 pandemic and resulting economic downturn.
2. Impact of Shifts in Industrial Mix on Claim Frequency. Changes in industrial mix can significantly impact measures of indemnity claim frequency. Exhibit 2 shows historical and forecast changes in indemnity claim frequency adjusted for changes in industrial mix (Intra-Class), indemnity claim frequency including the impact of changes in industrial mix (Overall) and the effect of changes in industrial mix on indemnity claim frequency (Inter-Class). Shifts in industrial mix, influenced by the Great Recession and, in particular, its impact on construction employment, contributed to annual declines from 1% to 2% in indemnity claim frequency from accident years 2008 through 2012. The WCIRB projects that shifts in industrial mix caused by the recent COVID-19-related economic downturn will contribute to a 3% decline in indemnity claim frequency for 2020.²¹ Although the WCIRB relies on changes in intra-class indemnity claim frequency to project changes in claim frequency in pure premium rate projections, this dramatic shift will impact measures of overall claim frequency and severity for accident year 2020.²²
3. Changes in Reported Claim Severities. Exhibits 3.1 and 3.2 show changes in average incurred indemnity and average incurred medical per indemnity claim, respectively. Exhibits 3.3 and 3.4 show changes in average paid indemnity per indemnity claim and average paid medical per claim, respectively. As shown in Exhibits 3.1 and 3.3, changes in both incurred and paid indemnity severities through 2017 at the most recent evaluation have been modest despite the increases to permanent disability benefits enacted pursuant to SB 863 and growth in average wages impacting indemnity benefits. However, the changes for 2018 and 2019 at the most recent evaluation are higher than each of the last several accident years. As shown in Exhibits 3.2 and 3.4, both incurred and paid medical severities declined in 2012 through 2017, which is likely attributable to SB 863, SB 1160 and AB 1244, the dramatic reductions in pharmaceutical costs, and efforts to fight medical provider fraud. After increasing moderately in 2018, both incurred and paid medical severities were generally flat in 2019. Severities for the first three months of accident year 2020 show increases in each of the measures shown in Exhibits 3.1 through 3.4. However, this data is only based on information through three months and average claim costs for the remainder of 2020 will be significantly impacted by the COVID-19 pandemic.
4. Changes in Projected Ultimate and On-level Claim Severities. Section B, Exhibit 6.2 shows accident year indemnity severities on an estimated ultimate and on-level basis. Section B, Exhibit 6.4 shows

²⁰ See *Analysis of Changes in Indemnity Claim Frequency*, WCIRB, August 2012 and updates to this report published in 2013, 2015 and 2016.

²¹ The impact of changes in industrial mix on indemnity claim frequency for accident years 2019 through 2022 shown in Exhibit 2 are projections based on forecast shifts in employment by industry published by the UCLA Anderson School of Business.

²² See Item AC20-08-04 of the August 4, 2020 WCIRB Actuarial Committee Agenda for more information.

accident year medical severities on an estimated ultimate and on-level basis.²³ As shown in Section B, Exhibits 6.2 and 6.4, after several years of significant increases in indemnity and medical claim severities following the 2002 through 2004 reforms, changes in ultimate claim severities significantly moderated during the Great Recession and leading into the transition to SB 863. As shown in Section B, Exhibit 6.2, on-level indemnity severities declined in 2010 through 2017, but increased modestly for 2018 and 2019. As shown in Section B, Exhibit 6.4, average medical severities declined in 2012 through 2016, in large part related to the SB 863 provisions affecting medical costs. The medical severities adjusted to an on-level basis that include adjustments to reflect the estimated impact of SB 863 for this period show more modest changes. Although average on-level medical severities grew by 4% in 2018, the average severity decreased by -2% in 2019. A review of WCIRB unit statistical data and medical transaction data suggested that some of the factors driving the 2018 and 2019 changes include a greater than typical number of large claims incurred in 2018 and reductions in the utilization of physician services paid on 2019 claims through 12 months.

Selected Trending Methodologies

In order for the proposed pure premium rates to reflect the cost of benefits incurred on policies incepting between January 1, 2021 and August 31, 2021, the historical estimated ultimate loss ratios, adjusted to an on-level basis, are trended to a level underlying this policy period. Specifically, the on-level ratios are trended to November 1, 2021—the approximate average date of experience on policies incepting between January 1, 2021 and August 31, 2021.

For many years, the WCIRB has separately analyzed changes in claim frequency and the average cost, or severity, of claims when considering the appropriate loss trends. Claim frequency and claim severity are affected by differing underlying forces. Trending methods that separately trend for frequency and severity allow for separate assumptions on each component and are particularly appropriate in environments where historical loss ratios have been volatile or during periods of transition in which some judgment about future trends may be appropriate. These methods rely on accurate projections of frequency and severity and assume that frequency and severity changes are not highly correlated.

In 2012, the WCIRB conducted a retrospective evaluation of trending methodologies with an emphasis on the appropriateness of trending frequency and severity separately relative to applying a combined loss ratio trend during varying claims environments.²⁴ The study noted that during the 2002 through 2004 reform transition period, trending methods based on separate projections of claim frequency and claim severity were more accurate than those based on trending historical on-level loss ratios. Updated studies conducted in 2017 and 2018 to include additional periods showed that methods based on separate frequency and severity trends continued to be more accurate than those based on a combined loss ratio trend in these periods as well.²⁵ The WCIRB's 2018 study also showed that methods which apply trends to the latest two accident years are generally more accurate and stable than those which apply trends only to the latest year, particularly during periods of transition or when the latest accident year is projected from 12 or 15 months.²⁶

Based in part on a review of the diagnostic information above and prior WCIRB retrospective studies of trending methodologies, the WCIRB continues to believe a trending approach based on separate projections of growth in claim frequency and growth in the average severity of claims applied to the latest two years' on-level loss ratios is appropriate. The WCIRB believes this approach of separately analyzing frequency and severity is particularly important in the current environment given the uncertainty in projecting costs during the COVID-19 pandemic for which the frequency and severity of claims are likely impacted by different forces.

²³ As discussed in Section B, for consistency of comparison, Section B, Exhibit 6.4 shows estimated ultimate medical severities for accident years 2005 and later both including all medical cost containment program (MCCP) costs and excluding all MCCP costs.

²⁴ See Item AC12-12-02 of the December 5, 2012 WCIRB Actuarial Committee Agenda.

²⁵ See Item AC12-12-02 of the August 2, 2017 WCIRB Actuarial Committee Agenda.

²⁶ See Item AC12-12-02 of the March 19, 2018 WCIRB Actuarial Committee Agenda.

Indemnity Claim Frequency Projections

Section B, Exhibit 6.1 shows projected changes in indemnity claim frequency rates based on the WCIRB's econometric frequency model used for a number of years in WCIRB pure premium rate filings.²⁷ This model projects indemnity frequency changes as a function of changes in indemnity benefit levels, economic variables, and other factors, but excludes the impact of projected future changes in the mix of industry classifications.²⁸ The frequency changes shown in Section B, Exhibit 6.1 are based on the ratio of indemnity claim counts to unit statistical reported exposure. Since 2018 is the most currently available accident year for which unit statistical data has been reported, the frequency changes shown in Section B, Exhibit 6.1 for accident years 2019 and beyond are model forecasts.

The WCIRB's forecast frequency changes are generally based on the WCIRB's econometric frequency model. However, in the WCIRB's 2012 analysis of trending methodologies, it was noted that frequency changes using a full year of preliminary actual frequency information was more predictive of the actual frequency change for that year than the change forecast based on the WCIRB's frequency model.²⁹ As a result, consistent with the last several pure premium rate filings, the projected frequency change for accident year 2019 is based on the preliminary actual 2019 frequency change of 0.9% (as shown in Exhibit 1), estimated as a ratio of changes in reported indemnity claim counts from accident year 2018 to accident year 2019 as of March 31, 2020 relative to changes in statewide employment.

Projected frequency changes for accident years 2020 through 2022 are based on the WCIRB's econometric indemnity claim frequency model. The WCIRB model forecasts for 2020 through 2022 reflect economic data as of the June 2020 UCLA forecast, which includes the forecast impact of the recent economic downturn on employment levels. Reflecting the significant employment declines in 2020 results in a model forecast of a significant decline in indemnity claim frequency in 2020. Earlier this year, the WCIRB reviewed indemnity claim frequency changes during prior recessions and found that the economic variable in the WCIRB's frequency model was generally predictive of frequency decreases during these periods.³⁰

The WCIRB's indemnity claim frequency model has for many years included a variable for the proportion of indemnity claims that are cumulative trauma (CT) injuries as growth in the proportion of CT claims has corresponded with growth in the frequency of non-CT claims over time. During the dot-com recession of the early 2000s as well as the Great Recession in 2009, the proportion of CT claims increased. In particular following the Great Recession, the frequency of CT claims filed on a post-termination basis increased significantly. The WCIRB believes the recent sudden and sharp economic downturn will result in growth in the proportion of CT claims similar to recent prior recessions. Although the WCIRB's recent study found that the potential for growth in post-termination CT claims in 2020 is significant,³¹ some of this growth is likely one-time in nature resulting from layoffs during the sudden economic downturn when California unemployment levels reached record highs and may not continue into the future. In consideration of these factors, the WCIRB projected growth in the proportion of CT claims for accident year 2020 based on the average growth in the first year of the prior two recessions and changes in the proportion of CT claims for accident year 2021 based on the average change in the first recovery year from the prior two recessions.³² Combined with the projected changes in the economic factors and other factors included in the WCIRB's frequency model, this results in intra-class frequency changes of -6.8%, 0.5%, and 0.0% projected for 2020, 2021, and 2022, respectively (as shown in Section B, Exhibit 6.1).

²⁷ Brooks, Ward, "California Workers Compensation Benefit Utilization – A Study of Changes in Frequency and Severity in Response to Changes in Statutory Workers Compensation Benefit Levels," *Proceedings of the Casualty Actuarial Society*, Volume LXXXVI, 1999, pp. 80-262.

²⁸ By modeling industrial mix-adjusted, or "intra-class" frequency, the WCIRB's model in effect controls for historical shifts in classification mix.

²⁹ See Item AC12-12-02 of the March 20, 2013 WCIRB Actuarial Committee Agenda.

³⁰ See *Impact of Economic Downturn on California Workers' Compensation Claim Frequency*, WCIRB, June 2020.

³¹ See *Impact of Economic Downturn on California Workers' Compensation Claim Frequency*, WCIRB, June 2020.

³² See Item AC20-08-04 of the August 4, 2020 WCIRB Actuarial Committee Agenda for more information.

Indemnity Severity Projection and Trended Loss Ratio for January 1, 2021 to August 31, 2021 Policies

The WCIRB projects average future indemnity severity growth based on a review of longer-term and shorter-term indemnity severity trends as well as changes in the underlying claims environment. Longer-term trends are less volatile and include both reform periods and post-reform periods as well as more developed accident years but include less current accident years that may not be highly indicative of the current claims environment. Shorter-term trends examine the most recent period which may be more indicative of the current claims environment but include less developed accident years and may be skewed by recent transitional effects such as reforms that may not be appropriate to project into the future.

Over the long-term, on-level indemnity severities have grown at a modest rate of approximately 1% per year since 1990. However, as shown in Section B, Exhibit 6.2, on-level indemnity severity growth is below 0% from 2010 through 2017. Some of the decline is likely related to the Great Recession and the economic recovery while some of the decline is likely the result of recent reductions in temporary disability duration and average permanent disability rating partly driven by accelerations in the rate that claims are settling. On-level indemnity severity changes for 2018 and 2019 are projected to increase modestly at a rate just below 1% per year following the multiple years of on-level indemnity severity declines. The approximate average of the long-term rate of growth in on-level indemnity severities (1%) and the average change over the last five years (-1%) is 0%.

The WCIRB believes several factors related to the COVID-19 pandemic and resulting economic downturn could result in increases in on-level indemnity severities:

1. The pandemic and resultant stay at home orders have resulted in significant delays in medical treatment including that provided to injured workers. A WCIRB preliminary analysis shows that delays in medical treatment on a claim can significantly impact both future indemnity and medical costs.³³
2. Temporary disability duration may increase during a recession as injured workers may have fewer employment opportunities available to them as they recover. As shown in Section B, Exhibit 6.2, during the Great Recession, on-level indemnity severities increased by 3.0% and 4.2% in 2008 and 2009, respectively.
3. Increases in the proportion of CT claims may also shift average indemnity costs upward as average indemnity costs on CT claims tend to be higher than for non-CT claims.³⁴
4. The economic-driven sharp decrease in indemnity claim frequency projected for 2020 may be disproportionate by size of claim as smaller claims may be relatively less likely to be filed, which could shift average indemnity severities upward.

In consideration of all these factors, the WCIRB has selected a 1% annual indemnity severity trend, which is somewhat higher than the average change over recent prior periods but generally consistent with the growth in on-level indemnity severities over the most recent two accident years and the average long-term indemnity severity trend. The WCIRB believes this selected indemnity severity trend is appropriate given the potential for increases in average indemnity costs due to the pandemic and the sharp downturn in the economy.

Section B, Exhibit 7.1 shows the projected indemnity loss ratio for January 1, 2021 to August 31, 2021 policies based on the average of the latest two accident year (2018 and 2019) on-level indemnity ratios adjusted by the WCIRB's selected frequency projections and the annual indemnity severity trend projection of 1% per year. The indemnity loss ratio projected using the WCIRB's selected trending methodology is 0.278.

³³ See Item AC20-08-05 of the August 10, 2020 WCIRB Actuarial Committee Agenda.

³⁴ See *The World of Cumulative Trauma Claims*, WCIRB, October 2018 for more information.

Medical Severity Projection and Trended Loss Ratio for January 1, 2021 to August 31, 2021 Policies

Similar to indemnity severities, the WCIRB has for a number of years based projected on-level medical severity growth on a review of longer-term and more recent medical severity trends. For medical in particular, policy year 2021 losses will be paid over a very extended period (e.g., over half of policy year 2020 losses will be paid in 2024 or later and over one-quarter will be paid in 2030 or later) and medical cost levels are impacted by when services are provided rather than by when the injury occurred. As a result, it is particularly important to consider both long-term and short-term medical severity trends in the projection of medical severity growth.

Since 1990, on-level medical severity growth in California has averaged approximately 5.5% per year. This long-term average trend includes periods of reforms where medical severities have been flat to declining and “post-reform” periods of sharp medical severity growth. Over the last several years, on-level medical severity growth has been modest. In particular, average medical severity changes over the last five years has been essentially flat at -0.1% per year (as shown in Section B, Exhibit 6.4). Although average on-level medical severities grew by 4% in 2018, they decreased by -2% in 2019.

As discussed above, the COVID-19 pandemic has significantly impacted the California workers’ compensation system. As a result, the uncertainty in projecting medical severity trends is much greater than usual. The WCIRB believes there are several factors related to the pandemic that may push medical costs upward in the future:

1. Delays or modifications in medical treatment due to shelter-in-place orders, increased social distancing, or a general slowdown in the claims process can increase medical costs. As discussed above, the WCIRB reviewed claims with delayed medical treatment and found them to incur significantly more medical treatment costs later on than claims with more timely medical treatment.
2. Although overall medical costs dropped sharply during the shelter-in-place period, a review of WCIRB medical transaction data has shown that, in the early months of the pandemic, pharmaceutical costs have begun to rise after declining sharply for the last several years.³⁵ Pharmaceutical costs had been a significant driver of increasing medical severities in the past, prior to their sharp decline beginning in 2013.
3. Indemnity claim frequency is projected to decline sharply in 2020 as a result of the recent economic downturn. Prior WCIRB studies have shown that these changes disproportionately impact smaller indemnity claims, which could push average medical severities upward.³⁶

Although the WCIRB is not projecting the 2020 accident year directly in this filing, the WCIRB believes some of these factors related to the pandemic will continue to impact average medical costs after 2020. Given these considerations, the WCIRB selected an average medical severity trend of 2.5%, which is somewhat higher than the average rate of growth over the last several years but corresponds with the approximate average of the long-term rate of growth of 5.5% per year and five-year rate of growth of -0.1% per year.

Section B, Exhibit 7.3 shows the medical loss ratio for January 1, 2021 to August 31, 2021 policies based on the average of the latest two accident year (2018 and 2019) on-level medical ratios adjusted by the WCIRB’s selected frequency projections and the annual medical severity trend projection of 2.5% per year. As shown in Section B, Exhibit 7.3 the medical loss ratio projected using the WCIRB’s selected methodology is 0.340.

³⁵ See Item AC20-08-05 of the August 10, 2020 WCIRB Actuarial Committee Agenda.

³⁶ See *Analysis of Changes in Indemnity Claim Frequency—January 2016 Update Report*, WCIRB, January 2016.

Summary of Alternative Trending Projections

The WCIRB's selected loss trending methodology is based on an average of projections of the latest two years' on-level ratios adjusted for its selected forecasts of changes in indemnity claim frequency and indemnity and medical claim severities. For informational purposes, the WCIRB has computed alternative loss projections based on a number of alternative loss trending methodologies reflecting underlying assumptions that differ from those reflected in the WCIRB's selected trending methodology. These alternative trending projections are shown in Exhibits 4 through 9 and are discussed below.

Trend Projections Based on Separate Frequency and Severity Projections Applied to the Latest Year
Applying trending projections to the latest year can be more responsive to recent experience. However, experience for the most recent year is the least mature and the most leveraged by loss development projections.

Exhibits 4.1 and 4.2 show an alternative trend projection based on applying the WCIRB's selected frequency changes and the annual on-level severity trend assumptions of 1% for indemnity and 2.5% for medical to the on-level loss ratios for the latest year (2019). This methodology produces a projection slightly below that produced by the methodology based on averaging the projections of the on-level loss ratios for the latest two years. As discussed previously, a 2018 WCIRB study showed that methods which apply trends to the latest two accident years are generally more accurate and stable than those which apply trends only to the latest year. Given the relative immaturity of the 2019 year, which is valued at 15 months as of March 31, 2020, the WCIRB believes basing the projection on the latest two years' experience is more appropriate.

Trend Projections Based on Separate Frequency and Severity Projections Using Frequency Trends with No Forecast Increase in the Proportion of Cumulative Trauma Claims Applied to the Latest Two Years
Exhibits 5.1 and 5.2 show a trend projection based on applying frequency changes forecast by the WCIRB's indemnity claim frequency model—without reflecting a projected increase in the proportion of CT claims—and selected severity trends to the on-level loss ratios for the latest two years. This methodology produces a projection significantly lower than that produced by the WCIRB's selected methodology, which includes a projected increase in the proportion of CT claims comparable to the prior two recessions. Given the significant increase in the proportion of CT claims during the Great Recession, growth in post-termination CT claims in recent years, and the large volume of Californians losing their job in recent months, the WCIRB believes reflecting an increase in the proportion of CT claims corresponding with the recent sharp economic downturn is appropriate.

Trend Projections Based on Separate Frequency and Severity Projections Using Frequency Trends with a Forecast Increase in the Proportion of Cumulative Trauma Claims Comparable to the Great Recession Applied to the Latest Two Years
Exhibits 6.1 and 6.2 show a trend projection based on applying frequency changes forecast by the WCIRB's indemnity claim frequency model—after reflecting a projected increase in the proportion of CT claims comparable to the Great Recession—and selected severity trends to the on-level loss ratios for the latest two years. This methodology produces a projection significantly higher than that produced by the WCIRB's selected methodology, which includes a projected increase in the proportion of CT claims comparable to the prior two recessions. Although the proportion of CT claims increased significantly during the Great Recession, the WCIRB believes reflecting an increase in the proportion of CT claims based on the average increase for the prior two recessions is appropriate given the sparsity of available years to review and uncertainty surrounding the recent economic downturn.

Trend Projections Based on Separate Frequency and Severity Projections Using Severity Trends Based on Long-Term Rates of Growth Applied to the Latest Two Years
Exhibits 7.1 and 7.2 show a trend projection based on applying the WCIRB's selected frequency changes and annual severity trend assumptions of 1.1% for indemnity and 5.5% for medical, based on the approximate average long-term (1990 to 2019) annual rates of growth in on-level indemnity and medical claim severities, to the on-level loss ratios for the latest two years. This methodology produces a projection significantly higher than that produced by the WCIRB's selected methodology, which gives consideration to both the longer-term and more recent severity trends as well as changes in the

underlying claims environment due to COVID-19. Given the impact of the pandemic, the WCIRB believes its selected severity trends, which give consideration to several factors including long-term severity trends, are appropriate.

Trend Projections Based on Separate Frequency and Severity Projections Using Severity Trends Based on Short-Term Rates of Growth Applied to the Latest Two Years

Exhibits 8.1 and 8.2 show a trend projection based on applying the WCIRB's selected frequency changes and annual severity trend assumptions of -1.2% for indemnity and -0.1% for medical, based on the approximate average short-term (2015 to 2019) annual rates of growth in on-level indemnity and medical claim severities, to the on-level loss ratios for the latest two years. This methodology produces a projection significantly lower than that produced by the WCIRB's selected methodology, which gives consideration to both the longer-term and more recent severity trends as well as changes in the underlying claims environment due to COVID-19. Given the impact of the pandemic, the WCIRB believes its selected severity trends, which give consideration to several factors including short-term severity trends, are more appropriate.

Trend Projections Based on On-Level Loss Ratios

Methods projecting future trends based on the historical on-level loss ratios may be appropriate when the historical ratios show a fairly stable trend or there is reason to believe that recent frequency and severity trends are highly correlated. They do not require knowledge or projection of separate frequency and severity components but rely more heavily on the accuracy of loss development and on-leveling adjustments. In the WCIRB's studies of trending methodologies, these methods performed well during the 2008 to 2011 recession period when historical on-level ratios were fairly stable, and frequency and severity changes differed from projections but did not perform well during transition periods when loss ratios were more volatile.

Exhibits 9.1 and 9.2 provide projections based on applying an exponential trend based on the 2015 through 2019 on-level indemnity and medical loss ratios shown in Section B, Exhibits 7.1 and 7.3 to each of the on-level loss ratios for the latest two years (2018 and 2019) and then averaging the projections. This alternative trending methodology produces projections below those based on the WCIRB's selected methodology. As discussed above, the WCIRB believes the approach of separately analyzing frequency and severity is particularly important in the current environment given the uncertainty in projecting costs during the COVID-19 pandemic for which the frequency and severity of claims are likely impacted by different forces.

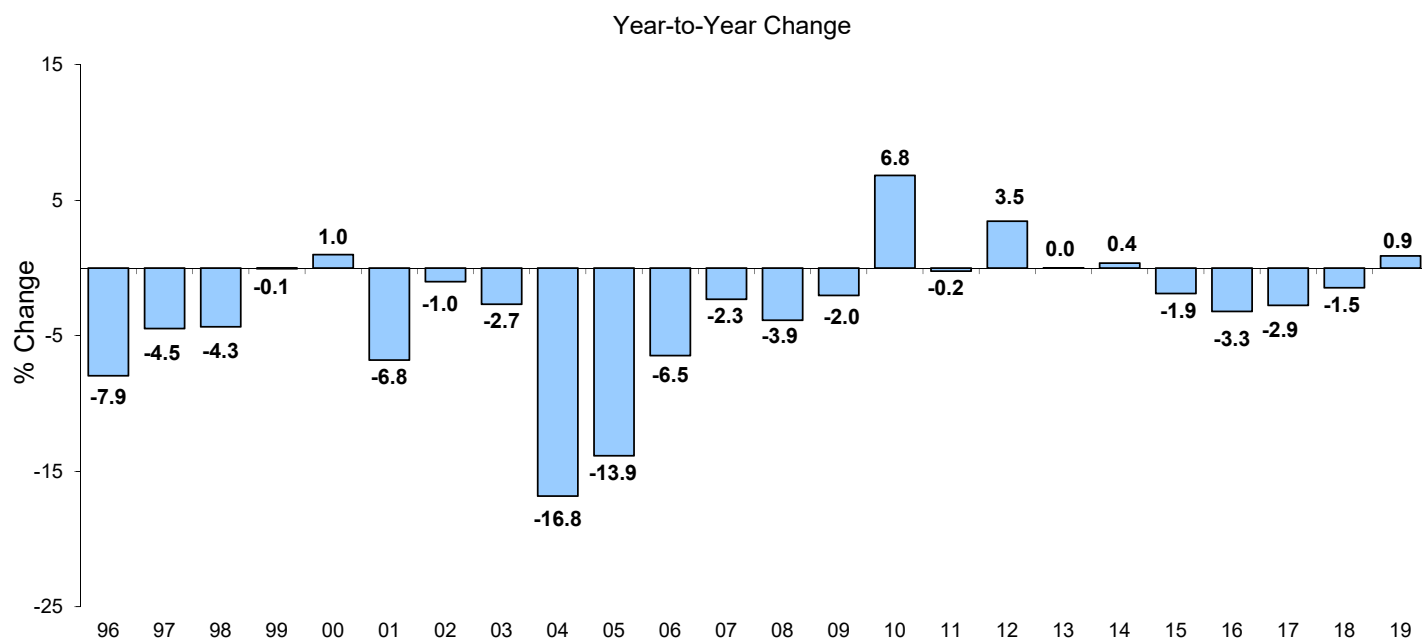
The loss ratio projections for January 1, 2021 to August 31, 2021 policies derived based on the trending methodology recommended by the WCIRB as well as each of the alternative trending methodologies described above are shown in Table 1.

Table 1: Projected Loss Ratios for January 1, 2021 to August 31, 2021 Policies

January 1, 2021 Filing Trending Methodology	Indemnity Loss Ratio	Medical Loss Ratio	Total Loss Ratio
Separate Projections of Frequency and Severity, Using WCIRB's Selected Frequency Changes and 1% Indemnity and 2.5% Medical Severity Trends, Applied to the Latest Two Years	0.278	0.340	0.618

Alternative Trending Methodologies	Indemnity Loss Ratio	Medical Loss Ratio	Total Loss Ratio
Separate Projections of WCIRB's Selected Frequency and Severity Trends Applied to the Latest Year	0.276	0.330	0.606
Separate Projections of Frequency Changes with No Increase in the Proportion of CT Claims and WCIRB's Selected Severity Trends Applied to the Latest Two Years	0.265	0.325	0.590
Separate Projections of Frequency Changes with an Increase in the Proportion of CT Claims Comparable to the Great Recession and WCIRB's Selected Severity Trends Applied to the Latest Two Years	0.291	0.356	0.647
Separate Projections of WCIRB's Selected Frequency and Long-Term (1990 to 2019) Severity Trends Applied to the Latest Two Years	0.279	0.369	0.648
Separate Projections of WCIRB's Selected Frequency and Short-Term (2015 to 2019) Severity Trends Applied to the Latest Two Years	0.261	0.316	0.577
2015 to 2019 On-Level Loss Ratio Exponential Trend Applied to Latest Two Years	0.259	0.318	0.577

**California Workers' Compensation
Estimated Indemnity Claim Frequency by Accident Year**



Note:

The 2019 estimate is based on a comparison of claim counts based on WCIRB accident year experience as of March 31, 2020 relative to the estimated change in statewide employment. Prior years are based on unit statistical data.

Indemnity Claim Frequency History and Projections

AY	Intra-Class Indemnity Claim Frequency(a)	Inter-Class Indemnity Claim Frequency Index(b)	Overall Indemnity Claim Frequency	Annual Percent Changes		
				Intra-Class	Inter-Class	Overall
1979	0.510	0.921	0.614	---	---	---
1980	0.476	0.914	0.570	-6.54%	-0.75%	-7.24%
1981	0.460	0.900	0.541	-3.54%	-1.56%	-5.04%
1982	0.452	0.882	0.522	-1.59%	-2.00%	-3.56%
1983	0.480	0.873	0.549	6.20%	-0.98%	5.17%
1984	0.526	0.871	0.600	9.53%	-0.18%	9.32%
1985	0.537	0.867	0.609	2.05%	-0.51%	1.52%
1986	0.524	0.859	0.589	-2.39%	-0.92%	-3.28%
1987	0.532	0.854	0.595	1.53%	-0.56%	0.97%
1988	0.536	0.854	0.598	0.69%	-0.06%	0.64%
1989	0.549	0.853	0.613	2.47%	-0.08%	2.39%
1990	0.599	0.845	0.662	9.04%	-0.89%	8.07%
1991	0.600	0.832	0.654	0.28%	-1.58%	-1.30%
1992	0.534	0.820	0.573	-11.09%	-1.45%	-12.37%
1993	0.454	0.810	0.481	-14.91%	-1.25%	-15.98%
1994	0.396	0.809	0.420	-12.76%	-0.06%	-12.81%
1995	0.378	0.811	0.401	-4.64%	0.16%	-4.49%
1996	0.352	0.800	0.369	-6.78%	-1.25%	-7.94%
1997	0.341	0.791	0.352	-3.27%	-1.23%	-4.46%
1998	0.328	0.786	0.337	-3.76%	-0.60%	-4.34%
1999	0.333	0.774	0.337	1.45%	-1.48%	-0.05%
2000	0.346	0.752	0.340	4.02%	-2.91%	0.99%
2001	0.322	0.753	0.317	-6.91%	0.13%	-6.79%
2002	0.315	0.763	0.314	-2.31%	1.34%	-1.00%
2003	0.306	0.764	0.306	-2.86%	0.20%	-2.67%
2004	0.255	0.763	0.254	-16.65%	-0.21%	-16.82%
2005	0.220	0.760	0.219	-13.59%	-0.31%	-13.85%
2006	0.208	0.754	0.205	-5.69%	-0.81%	-6.46%
2007	0.204	0.749	0.200	-1.64%	-0.68%	-2.31%
2008	0.199	0.740	0.192	-2.71%	-1.18%	-3.86%
2009	0.198	0.727	0.189	-0.20%	-1.82%	-2.02%
2010	0.216	0.713	0.201	8.87%	-1.87%	6.83%
2011	0.219	0.703	0.201	1.22%	-1.42%	-0.22%
2012	0.229	0.694	0.208	4.71%	-1.20%	3.46%
2013	0.230	0.692	0.208	0.36%	-0.36%	0.00%
2014	0.230	0.693	0.209	0.16%	0.21%	0.37%
2015	0.227	0.689	0.205	-1.26%	-0.60%	-1.85%
2016	0.221	0.684	0.198	-2.53%	-0.73%	-3.25%
2017(c)	0.217	0.679	0.192	-2.14%	-0.76%	-2.88%
2017(d)	0.215	0.679	0.191	---	---	---
2018(e)	0.213	0.676	0.189	-0.98%	-0.47%	-1.45%
2019	0.210	0.676	0.186	-1.37%	-0.04%	-1.41%
2020	0.196	0.654	0.168	-6.85%	-3.26%	-9.88%
2021	0.197	0.656	0.169	0.46%	0.39%	0.86%
2022	0.197	0.658	0.169	-0.03%	0.25%	0.22%
PY						
2008	0.199	0.734	0.191			
2009	0.206	0.720	0.194	3.89%	-1.84%	1.93%
2010	0.217	0.708	0.201	5.25%	-1.67%	3.53%
2011	0.223	0.699	0.204	2.80%	-1.32%	1.44%
2012	0.229	0.693	0.208	2.70%	-0.82%	1.87%
2013	0.230	0.693	0.208	0.27%	-0.10%	0.17%
2014	0.229	0.692	0.207	-0.48%	-0.16%	-0.64%
2015	0.224	0.687	0.202	-1.83%	-0.66%	-2.48%
2016	0.219	0.682	0.195	-2.61%	-0.74%	-3.33%
2017	0.214	0.678	0.190	-1.94%	-0.63%	-2.56%
2018	0.212	0.676	0.187	-1.15%	-0.28%	-1.43%
2019	0.204	0.666	0.178	-3.82%	-1.49%	-5.21%
2020	0.196	0.655	0.168	-3.67%	-1.64%	-5.31%
2021	0.197	0.657	0.169	0.24%	0.33%	0.57%

Notes: (a) All frequencies are per \$M exposure at PY 2018 Level.
 (b) Index is to AY 1961.
 (c) 2017 accidents on 2017 and 2016 policies.
 (d) 2017 accidents on 2016 policies only.
 (e) AY 2018 percent changes are based on a comparison of 2018 accidents on 2017 policies to 2017 accidents on 2016 policies.
 (f) Forecasts below thick solid line.

Source: WCIRB Indemnity Frequency Model

Accident	Evaluated as of (in months):									
Year	3	15	27	39	51	63	75	87	99	111
1995										14,502
1996									16,569	16,679
1997								18,747	18,893	18,927
1998							20,560	20,875	20,887	20,987
1999						21,705	22,190	22,329	22,514	22,641
2000					22,038	22,815	23,068	23,304	23,558	23,712
2001				21,931	23,880	24,418	24,907	25,387	25,747	25,945
2002			18,078	21,252	22,227	22,828	23,479	23,931	24,181	24,439
2003		12,130	18,210	20,328	21,644	22,692	23,404	23,856	24,354	24,782
2004	8,694	11,672	14,398	16,431	17,486	18,220	18,924	19,438	19,941	20,248
2005	9,450	8,769	12,094	14,081	15,273	16,219	17,010	17,663	18,053	18,341
2006	6,909	8,786	12,999	15,319	16,769	17,948	18,839	19,369	19,736	19,968
2007	6,686	9,236	13,915	16,722	18,363	19,524	20,360	20,932	21,386	21,608
2008	6,448	9,840	15,031	18,421	20,367	21,570	22,416	22,935	23,295	23,528
2009	6,412	10,194	15,766	19,008	21,195	22,422	23,298	23,730	24,091	24,399
2010	6,196	10,114	15,400	18,848	20,707	21,860	22,580	23,062	23,425	23,681
2011	6,101	10,591	15,887	18,817	20,594	21,503	22,135	22,623	22,962	23,184
2012	6,193	10,628	15,649	18,525	20,003	21,088	21,741	22,198	22,503	
2013	6,542	10,695	15,557	18,168	19,708	20,554	21,142	21,470		
2014	6,238	10,761	15,725	18,875	20,534	21,474	21,929			
2015	6,884	11,102	16,456	19,346	20,897	21,644				
2016	6,698	11,186	16,323	19,006	20,431					
2017	6,835	11,444	16,698	19,413						
2018	7,152	12,104	17,372							
2019	7,354	12,542								
2020	8,332									

Accident	Annual Change									
Year	3	15	27	39	51	63	75	87	99	111
1996										15.0%
1997									14.0%	13.5%
1998								11.4%	10.6%	10.9%
1999							7.9%	7.0%	7.8%	7.9%
2000						5.1%	4.0%	4.4%	4.6%	4.7%
2001					8.4%	7.0%	8.0%	8.9%	9.3%	9.4%
2002				-3.1%	-6.9%	-6.5%	-5.7%	-5.7%	-6.1%	-5.8%
2003			0.7%	-4.3%	-2.6%	-0.6%	-0.3%	-0.3%	0.7%	1.4%
2004		-3.8%	-20.9%	-19.2%	-19.2%	-19.7%	-19.1%	-18.5%	-18.1%	-18.3%
2005	8.7%	-24.9%	-16.0%	-14.3%	-12.7%	-11.0%	-10.1%	-9.1%	-9.5%	-9.4%
2006	-26.9%	0.2%	7.5%	8.8%	9.8%	10.7%	10.8%	9.7%	9.3%	8.9%
2007	-3.2%	5.1%	7.0%	9.2%	9.5%	8.8%	8.1%	8.1%	8.4%	8.2%
2008	-3.6%	6.5%	8.0%	10.2%	10.9%	10.5%	10.1%	9.6%	8.9%	8.9%
2009	-0.6%	3.6%	4.9%	3.2%	4.1%	4.0%	3.9%	3.5%	3.4%	3.7%
2010	-3.4%	-0.8%	-2.3%	-0.8%	-2.3%	-2.5%	-3.1%	-2.8%	-2.8%	-2.9%
2011	-1.5%	4.7%	3.2%	-0.2%	-0.5%	-1.6%	-2.0%	-1.9%	-2.0%	-2.1%
2012	1.5%	0.4%	-1.5%	-1.5%	-2.9%	-1.9%	-1.8%	-1.9%	-2.0%	
2013	5.6%	0.6%	-0.6%	-1.9%	-1.5%	-2.5%	-2.8%	-3.3%		
2014	-4.6%	0.6%	1.1%	3.9%	4.2%	4.5%	3.7%			
2015	10.4%	3.2%	4.6%	2.5%	1.8%	0.8%				
2016	-2.7%	0.8%	-0.8%	-1.8%	-2.2%					
2017	2.0%	2.3%	2.3%	2.1%						
2018	4.6%	5.8%	4.0%							
2019	2.8%	3.6%								
2020	13.3%									

Annual Trend*										
All-Year	-0.3%	1.1%	0.6%	0.1%	-0.1%	-0.2%	-0.1%	0.2%	0.9%	1.7%
R ²	0.017	0.267	0.086	0.003	0.003	0.007	0.003	0.012	0.132	0.281
5-Year	5.2%	3.3%	2.2%	1.4%	1.0%	0.3%	-1.0%	-2.4%	-1.2%	1.5%
R ²	0.881	0.931	0.874	0.693	0.484	0.055	0.465	0.989	0.540	0.265

*Trend is based on an exponential distribution.

Source: WCIRB quarterly calls for experience

Accident	Evaluated as of (in months):									
Year	3	15	27	39	51	63	75	87	99	111
1999										7,283
2000									8,016	8,186
2001								8,995	9,354	9,692
2002							9,075	9,426	9,757	10,044
2003						8,387	8,808	9,187	9,566	9,909
2004					6,479	6,964	7,356	7,809	8,109	8,365
2005				5,708	6,123	6,602	7,083	7,498	7,796	7,987
2006			5,494	6,328	6,899	7,408	7,865	8,241	8,523	8,668
2007		4,712	6,157	7,112	7,892	8,501	9,077	9,411	9,670	9,808
2008	4,170	5,170	6,839	8,052	8,964	9,724	10,243	10,588	10,790	10,885
2009	4,381	5,698	7,814	9,118	10,281	11,024	11,529	11,803	11,952	12,025
2010	4,450	5,892	8,015	9,597	10,610	11,290	11,660	11,895	12,011	12,134
2011	4,771	6,124	8,352	9,640	10,507	11,063	11,296	11,444	11,540	11,628
2012	4,766	6,246	8,154	9,241	9,889	10,348	10,576	10,711	10,862	
2013	5,155	6,302	8,058	8,878	9,493	9,752	9,957	10,042		
2014	4,781	6,119	7,627	8,549	9,040	9,309	9,500			
2015	4,903	6,213	7,744	8,563	8,955	9,166				
2016	4,906	6,355	7,754	8,374	8,685					
2017	4,964	6,256	7,537	8,195						
2018	5,241	6,551	7,845							
2019	5,367	6,512								
2020	5,868									

Accident	Annual Change									
Year	3	15	27	39	51	63	75	87	99	111
2000										12.4%
2001									16.7%	18.4%
2002								4.8%	4.3%	3.6%
2003							-2.9%	-2.5%	-2.0%	-1.3%
2004						-17.0%	-16.5%	-15.0%	-15.2%	-15.6%
2005					-5.5%	-5.2%	-3.7%	-4.0%	-3.9%	-4.5%
2006				10.9%	12.7%	12.2%	11.0%	9.9%	9.3%	8.5%
2007			12.1%	12.4%	14.4%	14.7%	15.4%	14.2%	13.5%	13.2%
2008		9.7%	11.1%	13.2%	13.6%	14.4%	12.8%	12.5%	11.6%	11.0%
2009	5.1%	10.2%	14.2%	13.2%	14.7%	13.4%	12.6%	11.5%	10.8%	10.5%
2010	1.6%	3.4%	2.6%	5.2%	3.2%	2.4%	1.1%	0.8%	0.5%	0.9%
2011	7.2%	3.9%	4.2%	0.5%	-1.0%	-2.0%	-3.1%	-3.8%	-3.9%	-4.2%
2012	-0.1%	2.0%	-2.4%	-4.1%	-5.9%	-6.5%	-6.4%	-6.4%	-5.9%	
2013	8.2%	0.9%	-1.2%	-3.9%	-4.0%	-5.8%	-5.8%	-6.2%		
2014	-7.3%	-2.9%	-5.3%	-3.7%	-4.8%	-4.5%	-4.6%			
2015	2.6%	1.5%	1.5%	0.2%	-0.9%	-1.5%				
2016	0.1%	2.3%	0.1%	-2.2%	-3.0%					
2017	1.2%	-1.6%	-2.8%	-2.1%						
2018	5.6%	4.7%	4.1%							
2019	2.4%	-0.6%								
2020	9.3%									

Annual Trend*										
All-Year	2.1%	2.1%	1.9%	2.4%	3.1%	2.9%	2.7%	2.6%	2.9%	3.3%
R ²	0.831	0.703	0.376	0.348	0.415	0.399	0.384	0.420	0.526	0.584
5-Year	4.5%	1.2%	0.3%	-1.8%	-3.1%	-4.7%	-5.2%	-4.2%	-0.2%	4.6%
R ²	0.924	0.696	0.087	0.925	0.958	0.958	0.990	0.886	0.005	0.647

*Trend is based on an exponential distribution.

Source: WCIRB quarterly calls for experience

Accident	Evaluated as of (in months):									
Year	<u>3</u>	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>	<u>99</u>	<u>111</u>
1995										13,350
1996									14,907	15,246
1997								16,593	17,059	17,416
1998							17,429	18,276	18,786	19,225
1999						17,740	19,054	19,878	20,491	20,963
2000					16,694	18,729	20,081	20,926	21,626	22,100
2001				14,500	18,363	20,463	21,942	22,945	23,645	24,173
2002			9,111	14,441	17,626	19,651	20,941	21,848	22,468	22,891
2003		3,726	9,504	14,406	17,494	19,412	20,695	21,522	22,171	22,754
2004	760	3,756	8,038	11,675	13,917	15,336	16,374	17,124	17,850	18,464
2005	835	3,441	7,291	10,216	12,255	13,505	14,485	15,292	16,033	16,648
2006	769	3,632	7,797	11,014	13,112	14,673	15,909	16,891	17,634	18,188
2007	883	3,874	8,383	11,878	14,295	16,059	17,384	18,423	19,183	19,775
2008	909	4,224	9,051	13,048	15,958	17,996	19,433	20,445	21,211	21,709
2009	926	4,212	9,213	13,476	16,536	18,681	20,202	21,275	22,081	22,715
2010	901	4,178	9,153	13,480	16,558	18,577	19,989	21,012	21,744	22,268
2011	967	4,237	9,385	13,529	16,397	18,325	19,674	20,672	21,438	21,920
2012	960	4,340	9,415	13,540	16,266	18,173	19,497	20,388	21,007	
2013	966	4,329	9,386	13,585	16,387	18,121	19,237	19,937		
2014	934	4,365	9,635	14,186	17,098	18,892	20,038			
2015	970	4,491	10,080	14,640	17,511	19,204				
2016	975	4,669	10,193	14,595	17,244					
2017	974	4,743	10,419	14,756						
2018	1,065	5,026	10,787							
2019	1,111	5,194								
2020	1,190									

Accident	Annual Change									
Year	<u>3</u>	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>	<u>99</u>	<u>111</u>
1996										14.2%
1997									14.4%	14.2%
1998								10.1%	10.1%	10.4%
1999							9.3%	8.8%	9.1%	9.0%
2000						5.6%	5.4%	5.3%	5.5%	5.4%
2001					10.0%	9.3%	9.3%	9.6%	9.3%	9.4%
2002				-0.4%	-4.0%	-4.0%	-4.6%	-4.8%	-5.0%	-5.3%
2003			4.3%	-0.2%	-0.7%	-1.2%	-1.2%	-1.5%	-1.3%	-0.6%
2004		0.8%	-15.4%	-19.0%	-20.4%	-21.0%	-20.9%	-20.4%	-19.5%	-18.9%
2005	9.9%	-8.4%	-9.3%	-12.5%	-11.9%	-11.9%	-11.5%	-10.7%	-10.2%	-9.8%
2006	-7.9%	5.5%	6.9%	7.8%	7.0%	8.6%	9.8%	10.5%	10.0%	9.3%
2007	14.9%	6.7%	7.5%	7.8%	9.0%	9.4%	9.3%	9.1%	8.8%	8.7%
2008	2.9%	9.1%	8.0%	9.9%	11.6%	12.1%	11.8%	11.0%	10.6%	9.8%
2009	1.9%	-0.3%	1.8%	3.3%	3.6%	3.8%	4.0%	4.1%	4.1%	4.6%
2010	-2.7%	-0.8%	-0.6%	0.0%	0.1%	-0.6%	-1.1%	-1.2%	-1.5%	-2.0%
2011	7.3%	1.4%	2.5%	0.4%	-1.0%	-1.4%	-1.6%	-1.6%	-1.4%	-1.6%
2012	-0.7%	2.4%	0.3%	0.1%	-0.8%	-0.8%	-0.9%	-1.4%	-2.0%	
2013	0.6%	-0.2%	-0.3%	0.3%	0.7%	-0.3%	-1.3%	-2.2%		
2014	-3.3%	0.8%	2.7%	4.4%	4.3%	4.3%	4.2%			
2015	3.9%	2.9%	4.6%	3.2%	2.4%	1.6%				
2016	0.5%	4.0%	1.1%	-0.3%	-1.5%					
2017	-0.1%	1.6%	2.2%	1.1%						
2018	9.3%	6.0%	3.5%							
2019	4.4%	3.3%								
2020	7.1%									

Annual Trend*										
All-Year	2.1%	2.1%	1.6%	0.8%	0.4%	0.2%	0.2%	0.4%	1.0%	1.7%
R ²	0.841	0.899	0.567	0.144	0.028	0.007	0.007	0.033	0.146	0.283
5-Year	5.4%	3.7%	2.6%	2.0%	1.8%	1.3%	-0.2%	-1.6%	-0.5%	2.3%
R ²	0.945	0.976	0.964	0.817	0.796	0.663	0.026	0.989	0.153	0.467

*Trend is based on an exponential distribution.

Source: WCIRB quarterly calls for experience

Accident	Evaluated as of (in months):									
Year	<u>3</u>	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>	<u>99</u>	<u>111</u>
1999										6,092
2000									6,708	6,965
2001								7,549	7,892	8,193
2002							7,608	8,006	8,356	8,643
2003						6,791	7,259	7,661	8,023	8,339
2004					4,883	5,455	5,919	6,310	6,661	6,985
2005				3,890	4,621	5,182	5,649	6,019	6,414	6,745
2006			3,234	4,292	5,105	5,741	6,276	6,722	7,105	7,388
2007		2,046	3,642	4,870	5,833	6,573	7,213	7,777	8,168	8,468
2008	413	2,339	4,088	5,495	6,657	7,582	8,318	8,864	9,270	9,571
2009	499	2,512	4,498	6,167	7,544	8,651	9,455	10,022	10,432	10,732
2010	517	2,570	4,649	6,497	8,011	9,048	9,803	10,373	10,766	11,043
2011	510	2,403	4,571	6,385	7,747	8,738	9,457	9,975	10,342	10,608
2012	462	2,419	4,521	6,225	7,473	8,385	8,999	9,442	9,767	
2013	484	2,423	4,446	6,078	7,279	8,055	8,586	8,941		
2014	519	2,387	4,351	5,958	7,074	7,792	8,298			
2015	545	2,375	4,407	5,927	6,992	7,645				
2016	523	2,511	4,467	5,913	6,877					
2017	628	2,515	4,419	5,778						
2018	609	2,616	4,623							
2019	661	2,591								
2020	681									

Accident	Annual Change									
Year	<u>3</u>	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>	<u>99</u>	<u>111</u>
2000										14.3%
2001									17.6%	17.6%
2002								6.1%	5.9%	5.5%
2003							-4.6%	-4.3%	-4.0%	-3.5%
2004						-19.7%	-18.5%	-17.6%	-17.0%	-16.2%
2005					-5.4%	-5.0%	-4.6%	-4.6%	-3.7%	-3.4%
2006				10.3%	10.5%	10.8%	11.1%	11.7%	10.8%	9.5%
2007			12.6%	13.5%	14.3%	14.5%	14.9%	15.7%	15.0%	14.6%
2008		14.3%	12.3%	12.8%	14.1%	15.4%	15.3%	14.0%	13.5%	13.0%
2009	20.7%	7.4%	10.0%	12.2%	13.3%	14.1%	13.7%	13.1%	12.5%	12.1%
2010	3.7%	2.3%	3.4%	5.3%	6.2%	4.6%	3.7%	3.5%	3.2%	2.9%
2011	-1.4%	-6.5%	-1.7%	-1.7%	-3.3%	-3.4%	-3.5%	-3.8%	-3.9%	-3.9%
2012	-9.5%	0.7%	-1.1%	-2.5%	-3.5%	-4.0%	-4.8%	-5.3%	-5.6%	
2013	4.9%	0.2%	-1.7%	-2.4%	-2.6%	-3.9%	-4.6%	-5.3%		
2014	7.2%	-1.5%	-2.1%	-2.0%	-2.8%	-3.3%	-3.4%			
2015	5.0%	-0.5%	1.3%	-0.5%	-1.2%	-1.9%				
2016	-4.2%	5.7%	1.4%	-0.2%	-1.6%					
2017	20.1%	0.2%	-1.1%	-2.3%						
2018	-3.0%	4.0%	4.6%							
2019	8.6%	-0.9%								
2020	3.1%									

Annual Trend*										
All-Year	3.4%	1.0%	1.8%	2.7%	3.6%	3.4%	3.2%	3.2%	3.5%	4.0%
R ²	0.793	0.402	0.429	0.444	0.536	0.494	0.449	0.460	0.553	0.626
5-Year	6.0%	2.2%	1.3%	-1.1%	-2.0%	-3.3%	-4.2%	-3.2%	1.0%	6.1%
R ²	0.795	0.813	0.726	0.902	0.973	0.983	0.996	0.761	0.065	0.737

*Trend is based on an exponential distribution.

**All entries reflect the paid cost of medical cost containment programs.

Source: WCIRB quarterly calls for experience

Projected On-Level Accident Year Indemnity Loss to Industry Average Filed Pure Premium Ratios Separate Applications of Frequency and Severity Trends Applied to Accident Year 2019 Based on Experience as of March 31, 2020				
Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.267	1.287	0.938	0.366
2013	0.230	1.259	0.820	0.352
2014	0.219	1.153	0.756	0.334
2015	0.213	1.137	0.722	0.336
2016	0.202	1.122	0.747	0.303
2017	0.206	1.093	0.783	0.287
2018	0.221	1.065	0.821	0.286
2019	0.253	1.036	0.909	0.288
				Projected (d)
2020				0.271
2021				0.275
11/1/2021				0.276

(a) See Section B, Exhibit 3.1.

(b) See Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2019 on-level ratio.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Severity Trends
Applied to Accident Year 2019
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.836	1.177	0.298
2009	0.496	0.825	1.269	0.322
2010	0.494	0.822	1.154	0.352
2011	0.429	0.836	1.054	0.340
2012	0.373	0.874	0.938	0.348
2013	0.307	0.949	0.820	0.356
2014	0.278	0.993	0.756	0.365
2015	0.264	1.011	0.722	0.369
2016	0.249	1.012	0.747	0.338
2017	0.255	1.014	0.783	0.331
2018	0.276	1.015	0.821	0.341
2019	0.299	1.011	0.909	0.333
				Projected (d)
2020				0.318
2021				0.327
11/1/2021				0.330

(a) See Section B, Exhibit 3.2.

(b) See Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.4, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2019 on-level ratio.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency with No Increase in the Proportion of Cumulative Trauma Claims
and Severity Growth Applied to the Latest Two Years
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.267	1.287	0.938	0.366
2013	0.230	1.259	0.820	0.352
2014	0.219	1.153	0.756	0.334
2015	0.213	1.137	0.722	0.336
2016	0.202	1.122	0.747	0.303
2017	0.206	1.093	0.783	0.287
2018	0.221	1.065	0.821	0.286
2019	0.253	1.036	0.909	0.288
				Projected (d)
2020				0.260
2021				0.264
11/1/2021				0.265

(a) See Section B, Exhibit 3.1.

(b) See Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency change for 2019 from Exhibit 1, and projected frequency trends of -11.1%, 0.6%, and 0.0% for accident years 2020 to 2022, respectively, based on the WCIRB's indemnity claim frequency model without an estimated increase in the proportion of cumulative trauma claims; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency with No Increase in the Proportion of Cumulative Trauma Claims
and Severity Growth Applied to the Latest Two Years
Based on Experience as of March 31, 2020**

	(1)	(2)	(3)	(4)
Accident Year	Developed Medical Loss Ratio (a)	Composite Medical Adjustment Factor (b)	Composite Premium Adjustment Factor (c)	On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.836	1.177	0.298
2009	0.496	0.825	1.269	0.322
2010	0.494	0.822	1.154	0.352
2011	0.429	0.836	1.054	0.340
2012	0.373	0.874	0.938	0.348
2013	0.307	0.949	0.820	0.356
2014	0.278	0.993	0.756	0.365
2015	0.264	1.011	0.722	0.369
2016	0.249	1.012	0.747	0.338
2017	0.255	1.014	0.783	0.331
2018	0.276	1.015	0.821	0.341
2019	0.299	1.011	0.909	0.333
				Projected (d)
2020				0.312
2021				0.322
11/1/2021				0.325

(a) See Section B, Exhibit 3.2.

(b) See Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency change for 2019 from Exhibit 1, and projected frequency trends of -11.1%, 0.6%, and 0.0% for accident years 2020 to 2022, respectively, based on the WCIRB's indemnity claim frequency model without an estimated increase in the proportion of cumulative trauma claims; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency with an Increase in the Proportion of Cumulative Trauma Claims
Comparable to the Great Recession and Severity Growth Applied to the Latest Two Years
Based on Experience as of March 31, 2020

	(1)	(2)	(3)	(4)
Accident Year	Developed Indemnity Loss Ratio (a)	Composite Indemnity Adjustment Factor (b)	Composite Premium Adjustment Factor (c)	On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.267	1.287	0.938	0.366
2013	0.230	1.259	0.820	0.352
2014	0.219	1.153	0.756	0.334
2015	0.213	1.137	0.722	0.336
2016	0.202	1.122	0.747	0.303
2017	0.206	1.093	0.783	0.287
2018	0.221	1.065	0.821	0.286
2019	0.253	1.036	0.909	0.288
				Projected (d)
2020				0.282
2021				0.290
11/1/2021				0.291

(a) See Section B, Exhibit 3.1.

(b) See Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Section B, Exhibit 6.2, the actual frequency change for 2019 from Exhibit 1, and projected frequency trends of -3.6%, 1.6%, and 0.0% for accident years 2020 to 2022, respectively, based on the WCIRB's indemnity claim frequency model with an estimated increase in the proportion of cumulative trauma claims comparable to the Great Recession; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency with an Increase in the Proportion of Cumulative Trauma Claims
Comparable to the Great Recession and Severity Growth Applied to the Latest Two Years
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.836	1.177	0.298
2009	0.496	0.825	1.269	0.322
2010	0.494	0.822	1.154	0.352
2011	0.429	0.836	1.054	0.340
2012	0.373	0.874	0.938	0.348
2013	0.307	0.949	0.820	0.356
2014	0.278	0.993	0.756	0.365
2015	0.264	1.011	0.722	0.369
2016	0.249	1.012	0.747	0.338
2017	0.255	1.014	0.783	0.331
2018	0.276	1.015	0.821	0.341
2019	0.299	1.011	0.909	0.333
				Projected (d)
2020				0.339
2021				0.353
11/1/2021				0.356

(a) See Section B, Exhibit 3.2.

(b) See Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Section B, Exhibit 6.4, the actual frequency change for 2019 from Exhibit 1, and projected frequency trends of -3.6%, 1.6%, and 0.0% for accident years 2020 to 2022, respectively, based on the WCIRB's indemnity claim frequency model with an estimated increase in the proportion of cumulative trauma claims comparable to the Great Recession; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Long-Term Severity Trends
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.267	1.287	0.938	0.366
2013	0.230	1.259	0.820	0.352
2014	0.219	1.153	0.756	0.334
2015	0.213	1.137	0.722	0.336
2016	0.202	1.122	0.747	0.303
2017	0.206	1.093	0.783	0.287
2018	0.221	1.065	0.821	0.286
2019	0.253	1.036	0.909	0.288
				Projected (d)
2020				0.273
2021				0.278
11/1/2021				0.279

(a) See Section B, Exhibit 3.1.

(b) See Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on the 1990-2019 annual indemnity severity trend of 1.1%, the actual frequency change for 2019 from Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Long-Term Severity Trends
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.836	1.177	0.298
2009	0.496	0.825	1.269	0.322
2010	0.494	0.822	1.154	0.352
2011	0.429	0.836	1.054	0.340
2012	0.373	0.874	0.938	0.348
2013	0.307	0.949	0.820	0.356
2014	0.278	0.993	0.756	0.365
2015	0.264	1.011	0.722	0.369
2016	0.249	1.012	0.747	0.338
2017	0.255	1.014	0.783	0.331
2018	0.276	1.015	0.821	0.341
2019	0.299	1.011	0.909	0.333
				Projected (d)
2020				0.342
2021				0.363
11/1/2021				0.369

(a) See Section B, Exhibit 3.2.

(b) See Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on the 1990-2019 annual medical severity trend of 5.5%, the actual frequency change for 2019 from Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Short-Term Severity Trends
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.267	1.287	0.938	0.366
2013	0.230	1.259	0.820	0.352
2014	0.219	1.153	0.756	0.334
2015	0.213	1.137	0.722	0.336
2016	0.202	1.122	0.747	0.303
2017	0.206	1.093	0.783	0.287
2018	0.221	1.065	0.821	0.286
2019	0.253	1.036	0.909	0.288
				Projected (d)
2020				0.264
2021				0.262
11/1/2021				0.261

(a) See Section B, Exhibit 3.1.

(b) See Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on the 2015-2019 annual indemnity severity trend of -1.2%, the actual frequency change for 2019 from Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Short-Term Severity Trends
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.836	1.177	0.298
2009	0.496	0.825	1.269	0.322
2010	0.494	0.822	1.154	0.352
2011	0.429	0.836	1.054	0.340
2012	0.373	0.874	0.938	0.348
2013	0.307	0.949	0.820	0.356
2014	0.278	0.993	0.756	0.365
2015	0.264	1.011	0.722	0.369
2016	0.249	1.012	0.747	0.338
2017	0.255	1.014	0.783	0.331
2018	0.276	1.015	0.821	0.341
2019	0.299	1.011	0.909	0.333
				Projected (d)
2020				0.315
2021				0.317
11/1/2021				0.316

(a) See Section B, Exhibit 3.2.

(b) See Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected based on the 2015-2019 annual medical severity trend of -0.1%, the actual frequency change for 2019 from Exhibit 1, and projected frequency trends for accident years 2020 to 2022 from Section B, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Short-Term Exponential Loss Ratio Trend
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Indemnity Loss Ratio (a)	(2) Composite Indemnity Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.281	1.374	1.177	0.328
2009	0.329	1.347	1.269	0.349
2010	0.319	1.322	1.154	0.365
2011	0.298	1.304	1.054	0.369
2012	0.267	1.287	0.938	0.366
2013	0.230	1.259	0.820	0.352
2014	0.219	1.153	0.756	0.334
2015	0.213	1.137	0.722	0.336
2016	0.202	1.122	0.747	0.303
2017	0.206	1.093	0.783	0.287
2018	0.221	1.065	0.821	0.286
2019	0.253	1.036	0.909	0.288
				Projected (d)
2020				0.272
2021				0.262
11/1/2021				0.259

(a) See Section B, Exhibit 3.1.

(b) See Section B, Exhibit 4.1.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected by separately applying an exponential trend of approximately -3.6% based on the 2015 to 2019 on-level indemnity to industry average filed pure premium ratios to each of the 2018 and 2019 on-level indemnity to industry average filed pure premium ratios. Each stated projection is equal to the average of the corresponding trended on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Short-Term Exponential Loss Ratio Trend
Based on Experience as of March 31, 2020**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.836	1.177	0.298
2009	0.496	0.825	1.269	0.322
2010	0.494	0.822	1.154	0.352
2011	0.429	0.836	1.054	0.340
2012	0.373	0.874	0.938	0.348
2013	0.307	0.949	0.820	0.356
2014	0.278	0.993	0.756	0.365
2015	0.264	1.011	0.722	0.369
2016	0.249	1.012	0.747	0.338
2017	0.255	1.014	0.783	0.331
2018	0.276	1.015	0.821	0.341
2019	0.299	1.011	0.909	0.333
				Projected (d)
2020				0.327
2021				0.320
11/1/2021				0.318

(a) See Section B, Exhibit 3.2.

(b) See Section B, Exhibit 4.4.

(c) See Section B, Exhibit 5.2.

(d) These on-level ratios were projected by separately applying an exponential trend of approximately -2.0% based on the 2015 to 2019 on-level medical to industry average filed pure premium ratios to each of the 2018 and 2019 on-level medical to industry average filed pure premium ratios. Each stated projection is equal to the average of the corresponding trended on-level ratios.

(e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

Section B
Appendix C
Projected Loss Adjustment Expense Ratio

Section 11730 of the California Insurance Code provides that the advisory pure premium rates include a provision for loss adjustment expenses (LAE). As detailed in this Appendix, the WCIRB projects LAE on policies incepting between January 1, 2021 and August 31, 2021 at 34.0% of losses.

LAE is incurred by insurers in investigating, administering, and settling workers' compensation claims. These expenses include the costs associated with handling claims that can be directly allocated to a particular claim (allocated loss adjustment expenses or ALAE), as well as costs associated with handling claims that cannot be directly allocated to a particular claim (unallocated loss adjustment expenses or ULAE).

Beginning with policies incepting on or after July 1, 2010, the *California Workers' Compensation Uniform Statistical Reporting Plan—1995* (USRP) requires that the cost of medical cost containment programs (MCCP) be reported as ALAE rather than as medical loss. As a result, projections of MCCP costs are included in the projection of ALAE rather than in the projected on-level medical loss ratio. The projections of MCCP costs as well as the cost of ULAE and ALAE (excluding MCCP costs) for January 1, 2021 to August 31, 2021 policies are discussed separately below.

Exhibit 1 shows ratios of calendar year paid ALAE and paid ULAE to paid losses on a statewide basis and by type of insurer.¹ There are significant differences in LAE ratios by type of insurer. In particular, ratios of paid ULAE to paid losses for the State Compensation Insurance Fund (State Fund) have been much higher than those for the private insurers. Additionally, prior to calendar year 2013, the paid ULAE ratios of private insurers with workers' compensation business focused primarily in California had been more than double the ratios of insurers with significant writings in other states (national insurers), while ratios of paid ALAE to paid losses for California-focused private insurers had been much more comparable to those for national insurers.

As noted in prior pure premium rate filings, reported ULAE amounts for national insurers are typically based on apportioning countrywide ULAE amounts to California. In addition, national insurers more frequently write policies on a large deductible basis or make use of third-party administrators (TPA) to handle claims. As a result, the amount of ULAE costs apportioned to California by national insurers in prior years were not fully reflective of the complexity of the claims process in California and did not include all ULAE related to claims-handling costs on a first-dollar basis. However, national insurers tend to be larger in size and a 2014 WCIRB study showed that economies of scale is also a contributor to the lower ULAE ratios reported for national insurers.²

In 2015, the WCIRB studied the ULAE costs reported for California to better understand differences in ULAE ratios between insurers and to more appropriately project future ULAE costs in pure premium rates.³ As a result of this analysis, the WCIRB modified its Data Call for Direct California Workers' Compensation Experience Expense Information (Expense Call) to collect additional information from insurers to more accurately reflect ULAE costs related to large deductible policies or claims handled by TPA. Countrywide information on this basis has been reported by insurers to the WCIRB beginning with

¹ Ratios of paid ALAE to losses for calendar years 2010 through 2012 are affected by changes in the definition of MCCP costs to be reported as ALAE instead of medical losses for policies incepting on or after July 1, 2010. No adjustment for MCCP costs was made to the ratios shown in Exhibit 1.

² See Item AC14-08-08 of the August 5, 2014 WCIRB Actuarial Committee Agenda for more information.

³ See Item AC15-03-07 of the March 30, 2015, June 12, 2015, and August 6, 2015 WCIRB Actuarial Committee Agendas for more information.

the 2015 Expense Call. The additional information reported on the WCIRB's Expense Call related to ULAE costs includes (a) negative "service fee" type adjustments that are sometimes reflected in reported countrywide ULAE but may not be appropriate to reflect when projecting future advisory pure premium rates, (b) losses on claims on large deductible policies and/or handled by TPA for which the associated claims handling costs are not reported in countrywide ULAE amounts, and (c) various countrywide loss and ULAE amounts consistent with what is reported by insurers on the Insurance Expense Exhibit.

The approach used by the WCIRB to derive the ratios of California paid ULAE to paid losses for calendar years 2015 through 2019⁴ shown in Exhibit 1 and the paid ULAE amounts used to project the ratio of ULAE to loss involves several components. First, the reported negative "service fee" type adjustments to ULAE were added back into the reported countrywide paid ULAE amount. Second, countrywide paid losses on large deductible policies and/or claims handled by TPA for which the associated claims handling costs were not reported in countrywide paid ULAE were subtracted from the countrywide paid losses. This adjustment was applied to losses gross or net of deductible amounts depending on whether the insurer reported ULAE costs on a gross or net basis. Third, the adjusted countrywide paid ULAE ratio was derived based on the ratio of adjusted countrywide paid ULAE previously computed as described above to the computed adjusted countrywide paid losses. Fourth, the adjusted countrywide paid ULAE was derived by multiplying the adjusted countrywide paid ULAE ratio by the reported countrywide paid losses.

In 2017, the WCIRB reviewed a number of alternative bases of apportioning countrywide ULAE to California and determined that open indemnity claim counts were more highly correlated with paid ULAE and more responsive to the longer duration of claims in California than the alternative bases reviewed.⁵ As a result, beginning with the WCIRB's 2017 Expense Call, the WCIRB collects information on countrywide indemnity claim counts open at the end of the previous calendar year. In addition, for a number of the larger national insurers, the WCIRB collected similar information in order to apportion calendar year 2016 adjusted countywide paid ULAE to California based on open indemnity claim counts. The ULAE amounts for calendar years 2016 through 2019 reflected in the ULAE ratios shown in Exhibit 1 and in the projected ULAE ratio were determined using open indemnity claim counts to apportion insurers' countrywide ULAE to California.

For a number of insurers, the negative "service fee" type adjustments to ULAE do not apply and the reported countrywide ULAE reflects all claims handling costs on large deductible policies or related to claims handled by TPA. In these instances, the approach described above simplifies to apportioning the reported countrywide ULAE to California based on California's share of the insurer's countrywide open indemnity claim counts. Although the WCIRB believes open indemnity claim counts is a reasonable basis to apportion countrywide ULAE to California, some insurers may have a more detailed method to derive the California ULAE. As a result, for these insurers, the California paid ULAE as reported on the WCIRB's Expense Call was used in deriving the ratios of California paid ULAE to paid losses for calendar years 2015 through 2019 shown in Exhibit 1 and the paid ULAE amounts used to project the ratio of ULAE to loss in lieu of the formulaic approach discussed above.

Each of the major components of loss adjustment expense (ULAE, ALAE excluding MCCP costs, and MCCP costs) is analyzed separately and discussed below.

ULAE Projection

Since the January 1, 2013 Pure Premium Rate Filing, the WCIRB has based its ULAE projection on reported calendar year paid ULAE amounts rather than incurred ULAE amounts. ULAE projections based on incurred ULAE amounts can be significantly distorted by changes in reserves related to older accident years and paid ULAE ratios have been relatively more stable than incurred ULAE ratios. In addition, it is

⁴ In addition, ULAE ratios for calendar years 2013 and 2014 have been partially adjusted for these issues based on information provided by several large national insurers for these calendar years.

⁵ See Item AC17-09-02 of the September 5, 2017 WCIRB Actuarial Committee Agenda.

unclear to what extent the adjustments to reported countrywide paid ULAE amounts discussed above affect ULAE reserves.

As shown in Exhibit 1, there are significant differences in the historical LAE experience of State Fund compared to that of private insurers. Unlike many other insurers, State Fund makes extensive use of in-house defense counsel. Consistent with the requirements of the USRP, State Fund attempts to reassign the cost of in-house defense counsel to accident year and calendar year ALAE amounts. However, given State Fund's somewhat atypical ALAE and ULAE ratios, it is not clear if the reassigned in-house defense counsel costs are consistent with the reported defense costs of insurers that rely primarily on outside defense counsel. To address these concerns, as in the last several pure premium rate filings, the WCIRB has based the projected ratio of ULAE to loss primarily on statewide experience but using average ULAE costs based only on private insurer experience.

Exhibit 2 shows the average calendar year paid ULAE per open indemnity claim for private insurers. Average paid ULAE per open indemnity claim for calendar years 2016 to 2019 have been adjusted as described above and, as a result, are not comparable to the ULAE severities for prior years. (Average paid ULAE for per open indemnity claim for calendar years 2013 through 2015 reflect partial adjustments for the issues discussed above and are also not comparable to other periods.) ULAE paid per open indemnity claim for 2019 is 8% lower than that for 2018. This decrease could be partly related to efforts from insurers to settle larger, more complex claims faster over the last several years but could also be related to year-to-year variation in average paid ULAE.

Exhibits 3.1 through 3.5 show the projection of the ratio of ULAE to loss based on the relationship of calendar year paid ULAE to the number of indemnity claims open at the beginning of the calendar year. Average calendar year paid ULAE is based on private insurer experience, while all other information was computed on a statewide basis. This methodology assumes that ULAE paid for a year is a function of the volume of claims handled by claims adjusters during that year and that the timing of the payment of ULAE costs on January 1, 2021 to August 31, 2021 policies will be consistent with the timing of loss payments. Projected changes in open indemnity claim counts, as shown in Exhibits 3.1 through 3.4, are based on recent claim settlement patterns and the WCIRB's selected indemnity claim frequency changes (see Appendix B for a discussion of selected indemnity claim frequency changes).

The WCIRB is projecting future growth in paid ULAE per open indemnity claim to the January 1, 2021 to August 31, 2021 policy period based on the annual changes in average California wages. This trending approach assumes average ULAE costs, which are primarily for claims-adjuster salaries, grow at a rate comparable to that for statewide average wages. The wage projections used are based on the average of those produced by the UCLA Anderson School of Business and California Department of Finance forecasts (see Section B, Exhibit 5.1), as adjusted for the impact of the pandemic-related economic slowdown as discussed in Appendix B. These projected growth rates are then applied to each of the paid ULAE severities for calendar years 2018 and 2019 and averaged to project average ULAE costs for calendar years 2021 and 2022. The projected January 1, 2021 to August 31, 2021 policy period ULAE is based on a weighted average of calendar years 2021 and 2022, trended an additional 3.0 years to reflect the approximate average loss payment date on January 1, 2021 to August 31, 2021 policies. This ULAE projection methodology is consistent with that reflected in the last several pure premium rate filings. The projected ratio of ULAE to loss for January 1, 2021 to August 31, 2021 policies computed on this basis, as shown in Exhibit 3.5, is 14.1%.

The methodology presented in Exhibits 3.1 through 3.5 reflects only the relationship between ULAE paid amounts and the number of indemnity claims that were open in the beginning of the year and does not reflect potential differences in the cost of handling a serious claim relative to a less costly claim. The methodology reflected in Exhibit 4 relates ULAE paid amounts to paid loss amounts, which are reflective of differences in claim values. Ratios of calendar year paid ULAE to paid losses are based only on the experience of private insurers, while all other information reflects statewide experience. As with the

methodology based on calendar year paid ULAE per open indemnity claim, projected ratios of paid ULAE to paid losses for future calendar years shown in Exhibit 4 are based on the average of calendar years 2018 and 2019. Projected calendar year loss ratios are based on age-to-age paid indemnity and medical loss development factors as of December 31, 2019 experience.⁶ This ULAE projection methodology is consistent with that reflected in the last several pure premium rate filings. The projected ratio of ULAE to loss for January 1, 2021 to August 31, 2021 policies based on this methodology, as shown in Exhibit 4, is 13.2%.

The WCIRB selected the ULAE projection based on an average of the projections based on (a) the relationship between calendar year paid ULAE (for private insurers) and the number of open indemnity claims (see Exhibit 3.5) and (b) the relationship between calendar year paid ULAE (for private insurers) and paid losses (see Exhibit 4), which is consistent with the approach reflected in the last several pure premium rate filings. The WCIRB's projected ratio of ULAE to loss for January 1, 2021 to August 31, 2021 policies using this methodology is 13.7%.

Summary of Alternative ULAE Projections

For informational purposes, the WCIRB has computed alternative projections of ratios of ULAE to loss based on alternative methodologies reflecting underlying assumptions that differ from those reflected in the WCIRB's selected methodology. These alternative projections of ratios of ULAE to loss are shown in Exhibits 5 through 7 and are discussed below.

Calendar Year Paid ULAE Projections Trended from the Latest Year

Exhibit 5 shows a projection based on the relationship of ULAE paid to the number of open indemnity claims in which the projected ULAE is based on the WCIRB's projected trends applied to the latest calendar year (2019) only. Exhibit 6 shows a projection based on the relationship of paid ULAE to paid losses in which the projected ULAE is based on the latest calendar year (2019) paid ULAE to paid loss ratio. The projections based on these methodologies are slightly lower than those based on the analogous methodologies recommended by the WCIRB which apply the trend to the average of the latest two calendar years. In order to reduce volatility in year-to-year changes in average ULAE costs, the WCIRB recommends basing the ULAE projection on the average of the two most recent calendar years.

Calendar Year Paid ULAE per Weighted Open Indemnity Claim-Based Projections

Exhibit 7 shows a projection based on the relationship of ULAE paid to the number of weighted open indemnity claims. In Exhibit 7, future changes in ULAE are assumed to be related to changes in the sum of the number of indemnity claims open at the beginning of the period and twice the number of indemnity claims reported during the period (newly-opened claims are judgmentally assumed to involve twice the claims-handling activity as a claim that was open at the beginning of the period). As shown in Exhibit 7, the ULAE projection based on this methodology is slightly lower than that based on projecting paid ULAE per indemnity claims open at the beginning of the calendar year. Prior WCIRB studies of ULAE methodologies have showed that paid ULAE amounts are more highly correlated with open claim counts than with weighted open claim counts.

Calendar Year Ratios of ULAE to Loss

Table 1 shows an alternative ULAE projection based on recent ratios of calendar year paid ULAE to paid losses for private insurers, which are shown in Exhibit 1. A WCIRB study of LAE projection methods showed that changes in ULAE did not correlate well with changes in calendar year losses.⁷ As a result, the WCIRB recommends use of other alternative bases upon which to project future ULAE changes.

The ULAE to loss ratio projections for January 1, 2021 to August 31, 2021 policies derived using each of these alternative ULAE projection methodologies as well as the WCIRB's selected methodology are shown in Table 1.

⁶ See Item AC20-03-02 of the April 2, 2020 WCIRB Actuarial Committee Agenda.

⁷ *Analysis of Loss Adjustment Expense Trends*, WCIRB, April 3, 2008.

Table 1: ULAE to Loss Ratio Projections for January 1, 2021 to August 31, 2021 Policies

ULAE Projection Methodologies	Statewide with Private Insurer Average ULAE
January 1, 2021 Filing Methodology	
Paid ULAE per Open Indemnity Claim Applied to the Latest Two Years	14.1%
Paid ULAE to Paid Losses Applied to the Latest Two Years	13.2%
Average of Open Indemnity Claim-Based and Paid Loss-Based Projections	13.7%
Alternative Methodologies	
Paid ULAE per Open Indemnity Claim Applied to the Latest Year Only	13.2%
Paid ULAE to Paid Losses Applied to the Latest Year Only	12.3%
Paid ULAE per Weighted Open Indemnity Claim Applied to the Latest Two Years	13.6%
Latest Two Calendar Year Paid ULAE to Loss Ratios	14.0%
Latest Calendar Year Paid ULAE to Loss Ratio	13.1%

ALAE Projection – Excluding MCCP Costs

The WCIRB is projecting the ALAE to loss ratio for January 1, 2021 to August 31, 2021 policies using a methodology that projects future ALAE as a function of the anticipated future statewide number of indemnity claims and average private insurer ALAE per indemnity claim, which is consistent with the methodology reflected in the last several pure premium rate filings. The projections of ALAE discussed in this section are exclusive of MCCP costs, which are discussed separately below.

Effective January 1, 2013, Senate Bill No. 863 (SB 863) created the process of independent medical review (IMR) and independent bill review (IBR) to resolve medical treatment and billing disputes. Prior to January 1, 2016, the cost of IMR and IBR reports paid had been included in paid MCCP costs reported in ALAE. Beginning with IMR and IBR reports paid on or after January 1, 2016, the USRP requires that the cost of these reports no longer be included in reported MCCP costs although such costs continue to be required to be reported as ALAE. As a result, ALAE excluding MCCP costs paid in 2016 and later include the cost of IMR and IBR while ALAE excluding MCCP costs paid prior to 2016 do not include IMR and IBR costs. In order to review ALAE excluding MCCP costs on a comparable basis, as in the last several pure premium rate filings, the WCIRB adjusted all pre-2016 payments of ALAE excluding MCCP costs to include the cost of IMR and IBR for all periods. This adjustment was based on information on the number and average cost of an IMR and IBR obtained from the Division of Workers' Compensation (DWC). This adjustment is reflected in the paid ALAE amounts and projections of ratios of ALAE to loss shown in Exhibits 8 through 14. (A similar adjustment is made to MCCP costs, which is discussed separately below.)

Exhibit 8.1 shows average paid ALAE per reported indemnity claim by accident year for private insurers. Average ALAE costs at the latest evaluation for the accident years shown have been relatively flat. Exhibit 8.2 shows ratios of paid ALAE to paid losses for private insurers. As loss severities have decreased following the implementation of SB 863, ratios of paid ALAE to paid losses have generally increased steadily.

Exhibit 9 shows estimated ultimate ALAE per indemnity claim for private insurers. Exhibit 10 shows the ratio of accident year incremental paid ALAE to indemnity claims inventory by payment year for private insurers. Recent changes in average ALAE costs on both an ultimate accident year and calendar year basis have been modest.

Exhibits 11.1 through 11.4 show the projected ratio of ALAE to loss for January 1, 2021 to August 31, 2021 policies based on the projected frequency of indemnity claims and projected average ALAE cost per indemnity claim. Given State Fund's LAE characteristics discussed with respect to ULAE above, as with the projection of ULAE, the WCIRB is projecting the ALAE provision based on a combination of statewide claim and loss experience and private insurer average ALAE costs. The ultimate number of indemnity claims is projected based on the number of indemnity claims reported as of March 31, 2020, the latest year historical claim reporting pattern (see Exhibit 11.3), and the projected growth in indemnity claims based on the WCIRB's projected growth in intra-class indemnity claim frequency (see Appendix B for a discussion of projected indemnity claim frequency changes).

The estimated ultimate ALAE per indemnity claim shown in Exhibit 11.4 was projected based on paid ALAE amounts by accident year as of March 31, 2020 and the latest year historical ALAE development factor for private insurers.⁸ The long-term ALAE "tail" development factor applied after 339 months is based on fitting an inverse power curve to the historical paid ALAE development factors. Specifically, the inverse power curve was fit to the average of the latest three years' paid ALAE development factors for the 111-to-123-month through 339-to-351-month period, with the ALAE tail development factor based on the fitted curve values through 65 development years. The ALAE tail development factor derived based on this approach is shown in Exhibit 11.1 based on private insurer experience. (Exhibit 11.2 shows, for informational purposes, private insurer paid ALAE age-to-age factors on a quarterly basis.)

As discussed in Appendix A, indemnity claim settlement rates have accelerated over the last several years following the implementation of SB 863. As also discussed in Appendix A, the WCIRB has reflected adjustments to paid indemnity and medical loss development for the impact of changes in claim settlement rates including an adjustment to later period paid loss development for the recent claim settlement rate acceleration. In 2019, the WCIRB studied the potential impact of claim settlement rate changes on paid ALAE development which found that significant negative correlation exists between changes in claim settlement rates in earlier periods and the ALAE development that emerges for the accident year in later periods.⁹ For example, during a period of significant claim settlement increase, the WCIRB's study found that future paid ALAE development for that accident year emerged lower than otherwise projected.

In the January 1, 2020 Pure Premium Rate Filing, the WCIRB reflected an adjustment to cumulative paid ALAE development for the impact of claim settlement rate changes. The adjustment was based on a linear regression model applied to periods with significant claim settlement rate changes (1.5 points or greater) compared to the change in future paid ALAE development. Given the lack of precision in the model, the WCIRB judgmentally tempered the results when applying it to projected paid ALAE development. The WCIRB believes this adjustment works well during periods in which claim settlement rates continue to change significantly. However, since the approach was based on a review of the most recent evaluation of changes in claim settlement rates and cumulative paid ALAE development, it may not fully reflect the impact during periods in which claim settlement rate changes begin to moderate. For example, in 2018 the ultimate indemnity claim settlement rate at 27 months is comparable to that for 2017.¹⁰ Under the January 1, 2020 Pure Premium Rate Filing approach, an adjustment to paid ALAE development from 27 months to ultimate for accident year 2018 would not be applied. In this case, an adjustment when selecting age-to-age ALAE development from 2017 to develop 2018 from 27 to 39 months may not be appropriate. However, the claim settlement rate for 2018 at 27 months is 2.9% higher when compared to 2016, which is a significant change. In this case, ALAE development selected from 2016 and prior accident years to develop 2018 from 39 months may still be impacted by the claim settlement rate change since a different claim settlement pattern is reflected in the paid ALAE development for those years, and an adjustment may be appropriate.

⁸ Paid ALAE development factors have been adjusted to exclude all M CCP paid costs, which are projected separately.

⁹ See Item AC19-08-04 of the August 1, 2019 WCIRB Actuarial Committee Agenda.

¹⁰ See Exhibit 3 of Appendix A.

This year, the WCIRB reviewed the approach to adjust paid ALAE development for changes in claim settlement rates and developed a refinement to apply the approach on an incremental rather than a cumulative basis.¹¹ The refined approach is based on the linear regression results from the cumulative approach, adjusted to an incremental age-to-age basis. Table 2 shows the adjustments to age-to-age paid ALAE development through 75 months. Each age-to-age factor adjustment was computed based on the incremental difference from the cumulative adjustment at the prior age. Given the greater precision of the age-to-age adjustment approach, the WCIRB does not believe the judgmental tempering is appropriate.

Table 2 – Adjustment to ALAE Development based on 1 Point of Settlement Rate Change

Age	Indicated Cumulative Adjustment	Selected Age-to-Age Adjustment
75	-0.9%	-0.9%
63	-1.6%	-0.7%
51	-1.8%	-0.2%
39	-2.6%	-0.8%
27	-2.8%	-0.2%
15	-6.1%	-3.3%

The WCIRB continues to recommend that the adjustment factors shown in Table 2 only be applied to the projected age-to-age ALAE development if the claim settlement rate for the accident year at that evaluation changed by 1.5 points or greater in absolute value.¹² As shown in Appendix A, Exhibit 3, indemnity claim settlement rates for accident years 2015 through 2017 at the latest evaluation increased by 1.5 points or greater over the prior year, while accident year 2018 and 2019 claim settlement rates at the latest evaluation changed by less than 1.5 points over the prior year. As a result, the WCIRB adjusted paid ALAE age-to-age development projected for accident years 2015 through 2017 based on the values shown in Table 2. This adjustment is shown in Exhibit 11.1. The adjustments applied to project ALAE development for accident years 2015 through 2017 after 63, 51, and 39 months are also used to project accident year 2018 and 2019 ALAE development after 39 months.

As in the last several pure premium rate filings, the WCIRB has based the projected ALAE severity trend on the approximate average of the longer-term (since 2006) and shorter-term (2015 to 2019) average rates of growth in (a) estimated ultimate ALAE per indemnity claim for private insurers (Exhibit 9) and (b) incremental paid ALAE per open indemnity claim for private insurers (Exhibit 10). This approach results in an annual ALAE severity growth projection of 1.5% annually. This projected ALAE severity trend is lower than that reflected in the January 1, 2020 Pure Premium Rate Filing of 2.5% primarily as a result of favorable paid ALAE development continuing to emerge, which has been partially driven by increases in indemnity claim settlement rates reducing later period ALAE development (which the WCIRB adjusts for in the paid ALAE development projection as discussed above). The projected ALAE per indemnity claim for January 1, 2021 to August 31, 2021 policies is based on the selected 1.5% ALAE severity trend applied to the most recent two accident years' (2018 and 2019) ultimate ALAE per indemnity claim.

The WCIRB believes the ALAE projections based on latest year ALAE development and estimated growth in ALAE per indemnity claim are reasonable bases upon which to project future ALAE inasmuch as (a) changes in ALAE have shown to be reasonably well-correlated with changes in indemnity claim counts, (b) the method is responsive to changes in ALAE costs per indemnity claim, and (c) the method is responsive to anticipated future changes in claim frequency. In addition, during a study of ALAE projection methodologies, the WCIRB found that ALAE projections based on this methodology continued

¹¹ See Item AC19-08-04 of the August 4, 2020 WCIRB Actuarial Committee Agenda.

¹² The 1.5-point threshold is based on a 2017 WCIRB review of historical claim settlement rate changes compared to changes in loss development patterns. See Item AC17-03-03 of the March 21, 2017 WCIRB Actuarial Committee Agenda.

to be more accurate than other alternative methods tested.¹³ Exhibit 11.4 shows the projected ratio of ALAE (excluding MCCP costs) to loss on this basis, prior to the impact of Senate Bill No. 1160 (SB 1160) and Assembly Bill No. 1244 (AB 1244), of 17.0%.

SB 1160 and AB 1244 included a number of provisions related to lien filings that became effective in 2017. Liens incur significant ALAE costs in addition to the settlement costs paid to the lien claimant. As discussed in Appendix B, the WCIRB estimates a 60% reduction in lien filings resulted from SB 1160 and AB 1244, which corresponds to an approximate 9.6% reduction in ALAE (excluding MCCP) costs.¹⁴ Given that liens are generally filed much later in the life of claims, accident year 2017 and forward paid ALAE costs as of March 31, 2020 are only partially affected by the SB 1160 and AB 1224 lien reform provisions. SB 1160 and AB 1244 have also impacted the recent decreases in paid ALAE development for older accident years. In order to only reflect the impact of the reforms that is not yet reflected in the emerging ALAE data, the WCIRB is reflecting a 4.8% reduction in ALAE costs in the projections of the ALAE ratio.¹⁵ This adjustment, which is consistent with the approach reflected in the January 1, 2020 Pure Premium Rate Filing and is shown on line (g) of Exhibit 11.4, is based on judgmentally tempering the full estimated impact of 9.6% by the estimated average proportion of ultimate ALAE costs for accident years 2017 and 2018 that have emerged as of March 31, 2020 (50%). As shown on line (h) of Exhibit 11.4, the projected ratio of ALAE (excluding MCCP costs) to loss, after reflecting the impact of SB 1160 and AB 1244, is 16.1%.

Summary of Alternative ALAE (excluding MCCP Costs) Projections

For informational purposes, the WCIRB has computed alternative ALAE to loss ratio projections based on a number of alternative methodologies reflecting underlying assumptions that differ from those reflected in the WCIRB's recommended methodology. These alternative ALAE to loss ratio projections are shown in Exhibits 12 through 14 and are discussed below.

Projected Ultimate ALAE per Indemnity Claim and Future Number of Indemnity Claims with Trend Applied to the Latest Year

Exhibit 12 shows a method that projects the ALAE to loss ratio based on changes in indemnity claim frequency and ALAE severities which applies the WCIRB's projected frequency and ALAE severity trends to the projected ultimate ALAE per indemnity claim and ultimate indemnity claim counts for accident year 2019 only rather than for the most recent two accident years. This projection is comparable to that based on the WCIRB's selected ALAE projection methodology. Given the relative immaturity of the 2019 year, which is valued at 15 months as of March 31, 2020, the WCIRB believes basing the projection on the latest two accident years is more appropriate.

Paid ALAE Ratio Development Compared to Losses

This alternative ALAE method develops each accident year's paid ALAE to premium ratio through March 31, 2020 to an ultimate level using the projected ALAE development factors included in the WCIRB's recommended methodology. Once estimates of ultimate ALAE ratios by accident year are derived, those estimates are compared to estimates of ultimate losses and projected, or trended, forward to a January 1, 2021 through August 31, 2021 policy period basis. Exhibit 13 shows a projected ratio of ALAE to loss using this approach based on the average of the latest two years' projections. This method relies on the relationship of ALAE to loss amounts. Past WCIRB studies of ALAE methodologies have shown that historical changes in ALAE are more closely related to changes in the number of indemnity claims than to loss amounts. In addition, this method, which projects future ALAE only as a function of a historical ALAE to loss levels, is not responsive to anticipated changes in indemnity claim frequency levels.

¹³ See Item AC14-12-02 of the December 3, 2014 WCIRB Actuarial Committee Agenda.

¹⁴ See Section B of the WCIRB's July 1, 2018 Pure Premium Rate Filing and Attachment C to the WCIRB's Amended January 1, 2018 Pure Premium Rate Filing for more information on the estimated impact of SB 1160 and AB 1244 on ALAE costs.

¹⁵ In that medical bill disputes that would otherwise result in a filed lien are continuing to be pursued with insurer claim personnel, the WCIRB is not recommending an adjustment to the ULAE projection to reflect the SB 1160 and AB 1244 reduction in liens.

Paid ALAE to Paid Indemnity Development Compared to Losses

This method develops each accident year's ratio of cumulative paid ALAE to cumulative paid indemnity losses through March 31, 2020 to an ultimate level based on historical development patterns of the ratios of paid ALAE to paid indemnity losses. Once estimates of ultimate ratios of paid ALAE to paid indemnity by accident year are derived, those estimates are projected, or trended, to a basis underlying the January 1, 2021 to August 31, 2021 policy period. This method assumes that changes in ALAE are closely related to changes in indemnity losses. Exhibits 14.1 and 14.2 show projected ratios of ALAE to loss based on the development of the ratios of paid ALAE to paid indemnity based on a combination of statewide claim and loss experience and private insurer ALAE ratios using the latest year development factors, with the ALAE to loss ratio projection based on the average of the latest two years' projections. This method is based on the relationship between paid ALAE and paid indemnity. Historically, changes in ALAE have not been as well correlated with changes in indemnity losses as with the number of indemnity claims. In addition, this method, which projects future ALAE only as a function of a historical ALAE levels relative to historical indemnity losses, is not responsive to anticipated changes in indemnity claim frequency levels.

The projections of ratios of ALAE to loss for January 1, 2021 to August 31, 2021 policies derived from each of these alternative ALAE projection methodologies (after reflecting the impact of SB 1160 and AB 1244) as well as the WCIRB's selected methodology are shown in Table 3.

**Table 3: ALAE (excluding MCCP Costs) to Loss Ratio Projections
for January 1, 2021 to August 31, 2021 Policies**

ALAE Projection Methodologies	Statewide with Private Insurer Average ALAE
January 1, 2021 Filing Methodology Projected Ultimate ALAE per Indemnity Claim – Trend Based on Growth in ALAE per Indemnity Claim and WCIRB Selected Frequency Changes Applied to the Latest Two Years	16.1%
Alternative Methodologies Projected Ultimate ALAE per Indemnity Claim – Trend Applied to the Latest Year	16.2%
Latest Year Paid ALAE Ratio Development Compared to Losses – Projection Based on Latest Two Years	17.2%
Latest Year Paid ALAE to Paid Indemnity Development Compared to Losses – Projection Based on Latest Two Years	16.5%

Projection of MCCP Costs

As discussed above, beginning with policies incepting on or after July 1, 2010, MCCP costs are reported as ALAE rather than as medical loss. In that MCCP costs are fundamentally different than other ALAE costs, which are to a large extent related to litigation, the WCIRB continues to project the provision for MCCP costs separately from other ALAE costs.

Beginning in 2016, the cost of IMR and IBR is no longer reported in MCCP as a component of ALAE. As a result, MCCP costs paid in 2016 and later do not include the cost of IMR and IBR while MCCP costs paid prior to 2016 do include IMR and IBR costs. For consistency of comparison, similar to ALAE excluding MCCP costs, the WCIRB adjusted all pre-2016 MCCP payments to exclude the cost of IMR and IBR for all periods based on information obtained from the DWC on IMR and IBR determinations made prior to 2016 by accident year. This adjustment is reflected in the paid MCCP cost amounts and

projections of ratios of M CCP costs to loss shown in Exhibits 15 through 21. In this way, M CCP cost payment patterns can be reviewed on a consistent basis.

Exhibit 15 shows average paid M CCP per reported indemnity claim by accident year. Exhibit 16 shows estimated ultimate accident year M CCP per indemnity claim. Exhibit 17 shows calendar year paid M CCP costs per indemnity claims inventory (measured as the sum of indemnity claims open at the beginning of the calendar year and indemnity claims opened during the calendar year). After increasing in 2018, average M CCP costs declined by an analogous rate in 2019.

Exhibits 18.1 and 18.2 show the projection of M CCP costs on a statewide basis based on reported M CCP paid costs through March 31, 2020. The methodology used to project M CCP costs is very similar to the WCIRB's methodology used to project ALAE excluding M CCP costs. Reported accident year M CCP paid costs were developed to an ultimate basis using (a) latest year paid M CCP age-to-age development factors through 99 months, and (b) the cumulative medical loss development factors based on March 31, 2020 experience after 99 months.¹⁶

The projected M CCP cost severity trend was based on the approximate average of the annual rates of growth in (a) ultimate accident year M CCP costs per indemnity claim from 2015 through 2019 shown in Exhibit 16 and (b) calendar year M CCP costs per open indemnity claim from 2009 through 2019 shown in Exhibit 17, which is consistent with the approach used in the last several pure premium rate filings. This approach results in an annual M CCP severity growth projection of 0% annually, which is consistent with the M CCP severity trend selected in the January 1, 2020 Pure Premium Rate Filing. Inasmuch as the previously discussed factors impacting State Fund's ULAE and ALAE excluding M CCP cost experience do not impact State Fund's M CCP cost experience, the WCIRB's M CCP cost projection reflects statewide M CCP experience. As shown in Exhibit 18.2, the WCIRB's projected ratio of M CCP costs to loss for January 1, 2021 to August 31, 2021 policies based on this approach is 4.2%.

Summary of Alternative M CCP Cost Projections

For informational purposes, the WCIRB has computed alternative M CCP cost to loss ratio projections based on a number of alternative methodologies reflecting underlying assumptions that differ from those reflected in the WCIRB's recommended methodology. These alternative M CCP cost to loss ratio projections are shown in Exhibits 19 through 21 and are discussed below.

Projected Ultimate M CCP Cost per Indemnity Claims and Future Number of Indemnity Claims with Trend Applied to the Latest Year

Exhibit 19 shows the M CCP cost to loss ratio based on the WCIRB's selected M CCP cost development and trend projections, but applies the WCIRB's projected frequency and M CCP severity trends to the projected ultimate M CCP cost per indemnity claim and ultimate indemnity claim counts for accident year 2019 only rather than for the most recent two accident years. The result of this projection is generally consistent with that based on the methodology selected by the WCIRB based on trending from the most recent two accident years.

Projected Ultimate M CCP Cost per Indemnity Claims and Future Number of Indemnity Claims with Trend Based on Growth in Ultimate Accident Year M CCP Cost per Indemnity Claim

Exhibit 20 shows the M CCP cost to loss ratio based on the WCIRB's selected M CCP cost development and claim frequency projections, but using a M CCP severity trend based on the -1.2% average rate of growth in ultimate accident year M CCP cost per indemnity claim over the last five years (see Exhibit 16). This projection is somewhat below that based on the methodology recommended by the WCIRB. Given the growth in average M CCP costs over the long term as represented by the average calendar year paid M CCP cost per open indemnity claim, the WCIRB believes giving some weight to this severity trend is appropriate.

¹⁶ As discussed in prior pure premium rate filings, paid M CCP costs reported in medical losses cannot be completely separated from other paid medical costs prior to accident year 2012.

Projected Ultimate MCCP Cost per Indemnity Claims and Future Number of Indemnity Claims with Trend Based on Growth in Calendar Year MCCP Cost per Open Indemnity Claim

Exhibit 21 shows the MCCP cost to loss ratio based on the WCIRB's recommended MCCP cost development projections, but using a MCCP severity trend based on the 1.3% average rate of growth in calendar year MCCP paid per open indemnity claim (see Exhibit 17). This projection is somewhat above that based on the methodology recommended by the WCIRB. Given the recent shifts in projected ultimate average paid MCCP costs by accident year, the WCIRB believes giving some weight to this severity trend is appropriate.

The projections of the ratios of MCCP costs to loss derived from each of these alternative MCCP cost projection methodologies as well as the WCIRB's selected methodology are shown in Table 4.

**Table 4: MCCP Cost to Loss Ratio Projections
for January 1, 2021 to August 31, 2021 Policies**

MCCP Cost Projection Method	Statewide
January 1, 2021 Filing Methodology	
Projected Ultimate MCCP per Indemnity Claim – WCIRB Selected Frequency Changes and 0% MCCP Severity Trend Applied to the Latest Two Years	4.2%
Alternative Methodologies	
Projected Ultimate MCCP per Indemnity Claim – WCIRB Selected Frequency Changes and 0% MCCP Severity Trend Applied to the Latest Year	4.1%
Projected Ultimate MCCP per Indemnity Claim – WCIRB Selected Frequency Changes and Average Ultimate Accident Year MCCP Severity Trend (-1.2%) Applied to the Latest Two Years	4.1%
Projected Ultimate MCCP per Indemnity Claim – WCIRB Selected Frequency Changes and Average Calendar Year MCCP Severity Trend (1.3%) Applied to the Latest Two Years	4.4%

Based on the methodologies discussed above, the WCIRB projects a total provision of LAE to loss of 34.0% for January 1, 2021 to August 31, 2021 policies.

Summary of Paid LAE Ratios by Insurer Type

Paid ALAE to Paid Loss Ratios^[1]

<u>CY</u>	<u>State Fund</u>	<u>CA Private Insurers</u>	<u>National</u>	<u>Statewide</u>	<u>Private Insurers</u>
2007	5.4%	13.3%	15.4%	12.3%	15.2%
2008	5.6%	11.5%	13.3%	11.1%	13.1%
2009	6.2%	15.7%	14.8%	12.8%	14.9%
2010	5.9%	14.1%	15.5%	13.3%	15.3%
2011	5.9%	15.9%	17.3%	14.9%	17.2%
2012	6.3%	15.2%	19.1%	16.2%	18.6%
2013	5.9%	15.4%	20.0%	17.0%	19.5%
2014	8.4%	17.8%	21.3%	19.0%	20.8%
2015	10.1%	18.0%	22.6%	20.5%	22.0%
2016	11.0%	17.9%	22.4%	20.4%	21.6%
2017	10.8%	19.8%	22.7%	20.9%	22.3%
2018	11.4%	19.5%	23.0%	21.0%	22.4%
2019	12.9%	17.8%	22.8%	20.9%	22.0%

Paid ULAE to Paid Loss Ratios

<u>CY</u>	<u>State Fund</u>	<u>CA Private Insurers</u>	<u>National</u>	<u>Statewide</u>	<u>Private Insurers</u>
2010	27.9%	17.3%	6.4%	12.3%	7.9%
2011	28.9%	15.9%	6.5%	11.9%	7.7%
2012	45.0% ^[2]	15.0%	6.4%	14.8% ^[2]	7.5%
2013 ^[3]	21.8%	16.3%	8.5%	11.7%	9.4%
2014 ^[3]	28.8%	14.7%	7.7%	11.6%	8.6%
2015 ^[4]	35.1%	14.8%	10.2%	13.9%	10.9%
2016 ^[4]	37.6%	14.2%	12.8%	15.9%	13.0%
2017 ^[4]	25.6%	16.1%	14.1%	15.8%	14.4%
2018 ^[4]	24.8%	14.9%	14.8%	16.1%	14.8%
2019 ^[4]	21.3%	14.4%	12.8%	14.1%	13.1%

Paid LAE to Paid Loss Ratios

<u>CY</u>	<u>State Fund</u>	<u>CA Private Insurers</u>	<u>National</u>	<u>Statewide</u>	<u>Private Insurers</u>
2010	33.8%	31.4%	22.0%	25.6%	23.3%
2011	34.8%	31.8%	23.8%	26.8%	24.8%
2012	51.3% ^[2]	30.3%	25.5%	31.0% ^[2]	26.1%
2013 ^[3]	27.7%	31.7%	28.5%	28.6%	28.9%
2014 ^[3]	37.2%	32.5%	29.0%	30.6%	29.4%
2015 ^[4]	45.2%	32.8%	32.8%	34.4%	32.8%
2016 ^[4]	48.6%	32.1%	35.2%	36.3%	34.7%
2017 ^[4]	36.4%	36.0%	36.9%	36.7%	36.7%
2018 ^[4]	36.2%	34.4%	37.8%	37.1%	37.2%
2019 ^[4]	34.2%	32.2%	35.7%	35.0%	35.1%

Notes: ^[1] Medical Cost Containment Program (MCCP) costs on claims covered by policies incepting prior to July 1, 2010 are considered medical loss; those on claims covered by policies incepting July 1, 2010 and beyond are considered allocated loss adjustment expenses.

^[2] 2012 figure includes a one-time adjustment made by State Compensation Insurance Fund to reallocate liabilities related to pension benefits.

^[3] 2013 and 2014 ratios included information submitted by several large national insurers to more appropriately reflect ULAE costs related to deductible policies and third party administrators.

^[4] Reflects adjustments based on the Expense Call for ULAE costs related to deductible policies and third-party administrators. 2015 adjusted ratio is based on apportioning adjusted countrywide paid ULAE to California using paid losses. 2016 to 2019 adjusted ratios are based on apportioning adjusted countrywide paid ULAE to California using open indemnity claim counts.

Source: WCIRB expense calls and quarterly calls for experience.

Calendar Year ULAE Paid per Open Indemnity Claim - Private Insurers

Calendar Year	ULAE Paid (in Millions)	Number of Open Indemnity Claims at Beginning of the Year	Number of Indemnity Claims Reported During Year	ULAE Paid per Open Indemnity Claim	Annual Change
	(a)	(b)	(c)	(d)	(e)
2010	432	257,439	107,734	1,676	---
2011	450	267,152	116,356	1,684	0.5%
2012	474	279,015	122,080	1,698	0.8%
2013 (f)	644	294,011	131,749	2,192	---
2014 (f)	598	307,227	133,061	1,947	-11.2%
2015 (g)	774	311,158	140,302	2,486	---
2016 (g)	948	314,808	139,941	3,010	---
2017 (g)	1,045	311,196	145,909	3,359	11.6%
2018 (g)	1,072	304,634	146,120	3,520	4.8%
2019 (g)	947	293,377	149,363	3,229	-8.3%

Notes:

- (a) Calendar year ULAE paid is based on WCIRB expense calls. All figures in each calendar year contain information from the same combination of private insurers that submitted both the ULAE and claim count data for that calendar year. Therefore, each calendar year may contain a different mix of private insurers.
- (b), (c) Based on WCIRB accident year experience calls. Column (c) is for information only.
- (d) (a)/(b) x 1,000,000.
- (f) 2013 and 2014 paid ULAE included information submitted by several large national insurers to more appropriately reflect ULAE costs related to deductible policies and third party administrators.
- (g) Reflects adjustments for ULAE costs related to deductible policies and third-party administrators based on the Expense Call. 2015 paid ULAE is based on apportioning adjusted countrywide paid ULAE to California using paid losses. 2016 to 2019 paid ULAE are based on apportioning adjusted countrywide paid ULAE to California using open indemnity claim counts.

Source: WCIRB expense calls and quarterly calls for experience.

Reported Indemnity Claim Count Development - Statewide

Accident	Age-to-Age Development (in months):														
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1992															1.001
1993														1.001	1.000
1994													1.001	1.000	1.000
1995												1.001	1.000	1.004	1.001
1996											1.001	1.001	1.001	1.000	1.000
1997										1.001	1.000	1.000	1.000	1.000	1.000
1998									1.001	1.000	1.000	1.000	1.001	1.000	1.000
1999								1.001	1.002	1.000	1.000	1.000	1.000	1.000	1.001
2000							1.000	0.998	1.000	1.000	1.000	1.001	1.000	1.000	1.000
2001						0.999	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002					0.999	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003				0.999	1.008	0.998	0.999	0.999	1.000	0.999	1.000	1.000	1.000	1.000	1.000
2004			1.001	1.000	0.999	1.000	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
2005		1.007	1.004	1.000	1.001	1.001	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2006	1.115	1.013	1.005	1.002	1.001	1.000	1.005	1.001	1.000	1.000	1.000	1.000	1.000		
2007	1.125	1.015	1.006	1.004	1.002	1.000	1.001	1.001	1.000	1.000	1.000	1.000			
2008	1.153	1.023	1.011	1.005	1.003	1.001	1.001	1.001	1.000	1.000	1.000				
2009	1.194	1.029	1.011	1.006	1.003	1.002	1.001	1.000	1.000	1.000					
2010	1.220	1.030	1.011	1.006	1.004	1.002	1.001	1.000	1.000						
2011	1.230	1.033	1.014	1.007	1.002	1.001	1.001	1.001							
2012	1.241	1.035	1.013	1.005	1.003	1.001	1.001								
2013	1.240	1.031	1.010	1.004	1.002	1.002									
2014	1.239	1.027	1.010	1.004	1.002										
2015	1.236	1.027	1.006	1.003											
2016	1.244	1.029	1.007												
2017	1.220	1.023													
2018	1.226														

I. Age-to-Age (Latest Year)

1.226	1.023	1.007	1.003	1.002	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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II. Age-to-Ultimate

1.277	1.042	1.018	1.011	1.008	1.006	1.004	1.004	1.003	1.003	1.002	1.002	1.002	1.002	1.002	1.002
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III. Estimated Percent of Ultimate Indemnity Claims Reported

78.3%	96.0%	98.2%	98.9%	99.2%	99.4%	99.6%	99.6%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%
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Accident	Age-to-Age Development (in months):														
Year	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372
1989			1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990		1.001	0.999	1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
1991	1.001	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
1992	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000					
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000						
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000							
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000								
1998	1.000	1.000	1.000	1.000	1.000	1.000									
1999	1.000	1.000	1.000	1.000	1.000										
2000	1.000	1.000	1.000	1.000											
2001	1.000	1.000	1.000												
2002	1.000	1.000													
2003	1.000														

I. Age-to-Age (Latest Year)

1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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II. Age-to-Ultimate

1.002	1.002	1.002	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000
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III. Estimated Percent of Ultimate Indemnity Claims Reported

99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	100.0%	100.0%	100.0%	100.0%
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Source: WCIRB quarterly calls for experience.

Ultimate Indemnity Claim Settlement Ratios - Statewide

Accident	Evaluated as of (in months):															
Year	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192
1992																96.8%
1993															96.7%	97.0%
1994														96.8%	96.7%	98.3%
1995													95.7%	95.1%	97.7%	98.0%
1996												94.9%	93.9%	97.3%	97.6%	97.8%
1997											95.1%	95.1%	96.9%	97.2%	97.5%	97.0%
1998										94.8%	94.2%	96.5%	96.9%	97.4%	97.4%	97.7%
1999									93.5%	92.8%	96.1%	96.7%	97.2%	97.4%	97.8%	97.8%
2000								91.0%	92.1%	95.4%	96.3%	97.0%	97.5%	98.0%	97.5%	97.4%
2001							86.5%	90.8%	93.7%	95.0%	96.0%	96.8%	97.6%	96.9%	96.8%	97.2%
2002						81.9%	88.6%	91.6%	93.2%	94.5%	95.5%	96.5%	96.6%	96.7%	97.2%	97.5%
2003					75.9%	85.2%	89.1%	91.3%	93.0%	94.2%	95.5%	96.0%	96.2%	96.9%	97.3%	97.7%
2004				68.9%	80.3%	85.7%	88.7%	90.9%	92.6%	94.4%	95.3%	95.9%	96.6%	97.1%	97.6%	98.0%
2005			58.7%	73.7%	81.3%	85.6%	88.6%	90.9%	93.2%	94.5%	95.5%	96.2%	96.9%	97.4%	97.9%	
2006		45.5%	62.9%	74.1%	80.9%	85.2%	88.3%	91.3%	93.1%	94.3%	95.4%	96.3%	96.9%	97.5%		
2007	21.8%	47.7%	62.8%	73.1%	80.1%	84.7%	88.9%	91.5%	93.1%	94.6%	95.7%	96.5%	97.3%			
2008	22.7%	46.4%	61.1%	72.1%	79.4%	85.6%	89.4%	91.7%	93.4%	94.8%	95.9%	96.8%				
2009	21.6%	44.8%	60.0%	71.1%	80.0%	85.7%	89.5%	91.5%	93.5%	94.9%	96.2%					
2010	21.5%	45.8%	60.5%	73.0%	81.5%	86.7%	89.7%	92.5%	94.2%	95.8%						
2011	21.8%	45.5%	61.7%	74.1%	82.0%	86.4%	90.5%	92.9%	95.0%							
2012	21.6%	46.4%	63.2%	75.1%	82.1%	87.8%	91.3%	94.1%								
2013	21.0%	46.7%	63.4%	75.5%	84.0%	88.9%	92.8%									
2014	20.8%	46.9%	64.4%	77.2%	85.3%	90.3%										
2015	20.8%	48.4%	67.1%	79.7%	87.1%											
2016	21.7%	51.0%	69.7%	81.6%												
2017	23.9%	53.9%	71.9%													
2018	24.4%	54.1%														
2019	24.4%															

Accident	Evaluated as of (in months):														
Year	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989			98.1%	98.4%	99.3%	99.3%	99.4%	99.4%	99.5%	99.5%	99.4%	99.5%	99.6%	99.6%	99.7%
1990		97.6%	97.9%	98.9%	98.9%	99.0%	99.0%	99.1%	99.2%	99.2%	99.3%	99.3%	99.4%	99.5%	
1991	96.9%	97.0%	98.7%	98.6%	98.7%	98.8%	98.9%	98.9%	99.0%	99.1%	99.2%	99.2%	99.3%		
1992	96.9%	98.6%	98.6%	98.7%	98.8%	98.8%	98.9%	99.0%	99.1%	99.1%	99.2%	99.2%			
1993	98.5%	98.5%	98.6%	98.7%	98.7%	98.8%	98.9%	98.9%	99.0%	99.1%	99.1%				
1994	98.4%	98.5%	98.4%	98.5%	98.6%	98.5%	98.6%	98.7%	98.8%	98.9%					
1995	98.2%	97.8%	97.9%	98.0%	98.0%	98.1%	98.2%	98.3%	98.4%						
1996	97.2%	97.4%	97.5%	97.5%	97.6%	97.7%	97.8%	97.9%							
1997	97.3%	97.5%	97.5%	97.7%	97.8%	98.0%	98.1%								
1998	97.8%	97.7%	97.8%	98.0%	98.2%	98.3%									
1999	97.7%	97.9%	98.2%	98.4%	98.5%										
2000	97.7%	97.9%	98.2%	98.4%											
2001	97.5%	97.8%	98.1%												
2002	97.9%	98.2%													
2003	98.1%														

Source: WCIRB quarterly calls for experience.

Selected Indemnity Claim Reporting
and Closure Patterns - As of 12/31/2019

Notes:

- B-174
Workers' Compensation Insurance Rating Bureau of California®

Estimated Number of Open Indemnity Claims - Statewide

Based on Selected Reporting and Closure Patterns - As of December 31, 2019

AY	Estimated Number of Reported Indemnity Claims(a)			Estimated Number of Open Indemnity Claims(b)			Estimated Number of Indemnity Claims Opened During(c)		
	@12/31/20	@12/31/21	@12/31/22	@12/31/20	@12/31/21	@12/31/22	2020	2021	2022
1989	222,853	222,853	222,853	779	779	779	0	0	0
1990	249,184	249,184	249,184	871	871	871	25	0	0
1991	250,087	250,112	250,112	1,331	874	874	36	25	0
1992	198,574	198,603	198,622	1,371	1,057	694	16	29	20
1993	156,218	156,231	156,253	1,178	1,079	832	17	12	23
1994	143,827	143,843	143,854	1,182	1,085	993	26	16	12
1995	135,274	135,298	135,313	1,447	1,111	1,021	30	24	15
1996	133,196	133,226	133,250	1,974	1,425	1,095	36	30	24
1997	137,439	137,476	137,507	2,673	2,037	1,470	21	38	31
1998	147,559	147,582	147,622	2,580	2,871	2,187	34	22	40
1999	148,735	148,770	148,792	2,284	2,601	2,894	30	35	22
2000	162,010	162,043	162,081	2,084	2,489	2,834	17	33	38
2001	185,700	185,720	185,758	2,648	2,389	2,853	2	20	38
2002	194,721	194,724	194,745	3,388	2,776	2,505	5	2	21
2003	184,271	184,276	184,278	3,022	3,207	2,627	19	5	2
2004	158,988	159,004	159,009	2,755	2,607	2,767	-7	16	4
2005	139,599	139,593	139,608	2,534	2,419	2,289	-4	-6	14
2006	133,318	133,315	133,309	2,587	2,420	2,310	-19	-3	-6
2007	130,413	130,394	130,391	3,050	2,530	2,367	17	-19	-3
2008	123,166	123,181	123,164	3,137	2,881	2,390	26	16	-18
2009	113,965	113,989	114,003	3,409	2,903	2,666	38	24	15
2010	118,848	118,888	118,913	4,222	3,556	3,029	11	40	25
2011	121,090	121,102	121,142	4,775	4,302	3,623	59	12	40
2012	128,201	128,263	128,276	5,984	5,057	4,557	67	63	12
2013	136,307	136,378	136,444	7,583	6,365	5,380	96	71	67
2014	141,301	141,400	141,474	9,582	7,866	6,603	223	99	74
2015	145,178	145,408	145,510	13,357	9,860	8,094	327	230	102
2016	148,306	148,642	148,877	18,049	13,676	10,095	449	335	235
2017	148,400	148,851	149,187	25,950	18,116	13,726	1,028	451	336
2018	150,397	151,446	151,906	40,366	26,483	18,488	3,439	1,049	460
2019	149,825	153,332	154,401	65,387	41,153	27,000	27,602	3,506	1,069
<u>Projected</u>									
2020	113,912	139,637	142,905	78,375	60,940	38,355	113,912	25,726	3,268
2021		114,481	140,336		78,767	61,245		114,481	25,854
2022			114,481			78,767			114,481
Total	4,950,864	5,097,244	5,243,559	319,912	318,553	318,281	147,580	146,380	146,315
(d) Open Claims at Beginning of the Year:							321,964	319,912	318,553
(e) "Weighted" Open Claims:							617,124	612,672	611,183

Notes:

- (a), (b) Estimated based on the projected number of indemnity claims and selected reporting and closure patterns (see Exhibit 3.3).
- (c) Based on the difference in the estimated numbers of reported indemnity claims between two consecutive December 31 evaluations.
- (d) Based on the number of indemnity claims still open as of the previous year-end. For example, the number of open indemnity claims at the beginning of calendar year 2020 is the total number of indemnity claims from all accident years that were open as of December 31, 2019 (see column (4) total on Exhibit 3.3).
- (e) The "weighted" number of open claims is the sum of the number of open claims at the beginning of the year and twice the number of claims opened during the year.

Projected Ratio of ULAE to Loss - Statewide

Based on Estimated Calendar Year ULAE Paid per Open Indemnity Claim for Private Insurers
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

<u>Calendar Year</u>	<u>Number of Open Indemnity Claims at Beginning of the Year</u>	<u>ULAE Paid per Open Indemnity Claim</u>	<u>ULAE Paid (\$000)</u>
	(a)	(b)	(c)
2010	360,624	1,676	604,510
2011	360,339	1,684	606,894
2012	360,391	1,698	612,112
2013	365,706	2,192	801,569
2014	366,420	1,947	713,493
2015	367,925	2,486	914,731
2016	370,782	3,010	1,116,097
2017	362,328	3,359	1,217,236
2018	350,417	3,520	1,233,524
2019	333,086	3,229	1,075,655
Projected			
2020	321,964	3,470	1,117,334
2021	319,912	3,561	1,139,350
2022	318,553	3,695	1,177,202
(d) Projected ULAE Paid (\$000):			1,273,369
(e) Calendar Year 2019 Earned Premium (\$000):			16,100,338
(f) Projected Loss to Industry Average Filed Pure Premium Ratio:			0.618
(g) Premium Adjustment Factor for Calendar Year 2019:			0.909
(h) Projected Losses (\$000): (e) x (f) x (g)			9,044,558
(i) Projected Ratio of ULAE to Losses: (d)/(h)			14.1%

Notes:

- (a) Calendar years 2010 to 2019 are based on WCIRB accident year experience calls. 2020 to 2022 are from line (d), Exhibit 3.4.
- (b) Calendar years 2010 to 2019 are from column (d) of Exhibit 2. Calendar years 2020 to 2022 are projected based on applying the California average annual wage level changes selected by the WCIRB (see Section B, Exhibit 5.1), to the ULAE paid per open indemnity claim from averaging 2018 and 2019.
- (c) Column (a) x column (b).
- (d) Weighted average of calendar years 2021 with 67% and 2022 with 33%, projected 3 years to the approximate average midpoint of ultimate ULAE payments on January 1, 2021 to August 31, 2021 policies, based on applying the average annual change of 3.4% for 2022 and 2023 derived from the information published by the UCLA Anderson School of Business and the California Department of Finance.
- (e) Based on the reported earned premium from the same group of insurers that reported the number of open indemnity claims in calendar year 2019.
- (f) See Exhibit 8 of Section B.
- (g) See Exhibit 5.2 of Section B.

Projected Ratio of ULAE to Loss - Statewide
Based on Private Insurers ULAE Paid to Paid Losses Ratio
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

Calendar Year	Paid ULAE as % of Paid Losses ¹ (a)	Paid Loss as % of Premium (b)	Paid ULAE as % of Premium (c)=(a) x (b)
2011	0.077	70.1%	5.4%
2012	0.075	65.3%	4.9%
2013	0.094	58.5%	5.5%
2014	0.086	50.3%	4.3%
2015	0.109	47.8%	5.2%
2016	0.130	46.0%	6.0%
2017	0.144	46.8%	6.8%
2018	0.148	47.4%	7.0%
2019	0.131	51.5%	6.7%
Projected			
2020	0.139 ²	52.5% ³	7.3% ⁴
2021	0.139 ²	53.0% ³	7.4% ⁴
2022	0.139 ²	53.3% ³	7.4% ⁴
(d) Projected ULAE Paid to CY2019 Earned Premium Ratio: (67% of 2021 and 33% of 2022 in column (c))			7.4%
(e) Projected Loss to Industry Average Filed Pure Premium Ratio ⁵ :			0.618
(f) Premium Adjustment Factor for Calendar Year 2019 ⁶ :			0.909
(g) Projected Ratio of ULAE to Losses: (d) / [(e) x (f)]			13.2%

Notes:

¹ Based on private insurers ULAE to paid loss ratio. See Exhibit 1.² Based on averaging of the 2018 and 2019 paid ULAE to paid loss ratios.³ Estimated based on age-to-age paid indemnity and medical development factors from insurers' December 31, 2019 experience.⁴ (b) x (c).⁵ See Exhibit 8 of Section B.⁶ See Exhibit 5.2 of Section B.

Projected Ratio of ULAE to Loss - Statewide

Based on Estimated Calendar Year ULAE Paid per Open Indemnity Claim
for Private Insurers-Trend from Latest Year
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

Calendar Year	Number of Open Indemnity Claims at Beginning of the Year	ULAE Paid per Open Indemnity Claim	ULAE Paid (\$000)
	(a)	(b)	(c)
2010	360,624	1,676	604,510
2011	360,339	1,684	606,894
2012	360,391	1,698	612,112
2013	365,706	2,192	801,569
2014	366,420	1,947	713,493
2015	367,925	2,486	914,731
2016	370,782	3,010	1,116,097
2017	362,328	3,359	1,217,236
2018	350,417	3,520	1,233,524
2019	333,086	3,229	1,075,655
Projected			
2020	321,964	3,252	1,047,017
2021	319,912	3,337	1,067,647
2022	318,553	3,463	1,103,117
(d) Projected ULAE Paid (\$000):			1,193,231
(e) Calendar Year 2019 Earned Premium (\$000):			16,100,338
(f) Projected Loss to Industry Average Filed Pure Premium Ratio:			0.618
(g) Premium Adjustment Factor for Calendar Year 2019:			0.909
(h) Projected Losses (\$000): (e) x (f) x (g)			9,044,558
(i) Projected Ratio of ULAE to Losses: (d)/(h)			13.2%

Notes:

- (a) Calendar years 2010 to 2019 are based on WCIRB accident year experience calls. 2020 to 2022 are from line (d), Exhibit 3.4.
- (b) Calendar years 2010 to 2019 are from column (d) of Exhibit 2. Calendar years 2020 to 2022 are projected based on applying the California average annual wage level changes selected by the WCIRB (see Section B, Exhibit 5.1), to the 2019 ULAE paid per open indemnity claim.
- (c) Column (a) x column (b).
- (d) Weight average of calendar years 2021 with 67% and 2022 with 33%, projected 3 years to the approximate average midpoint of ultimate ULAE payments on January 1, 2021 to August 31, 2021 policies, based on applying the average annual change of 3.4% for 2022 and 2023 derived from the information published by the UCLA Anderson School of Business and California Department of Finance.
- (e) Based on the reported earned premium from the same group of insurers that reported the number of open indemnity claims in calendar year 2019.
- (f) See Exhibit 8 of Section B.
- (g) See Exhibit 5.2 of Section B.

Projected Ratio of ULAE to Loss - Statewide

Based on Private Insurers ULAE Paid to Paid Losses Ratio - Trend from Latest Year
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

Calendar Year	Paid ULAE as % of Paid Losses ¹ (a)	Paid Loss as % of Premium (b)	Paid ULAE as % of Premium (c)=(a) x (b)
2011	0.077	70.1%	5.4%
2012	0.075	65.3%	4.9%
2013	0.094	58.5%	5.5%
2014	0.086	50.3%	4.3%
2015	0.109	47.8%	5.2%
2016	0.130	46.0%	6.0%
2017	0.144	46.8%	6.8%
2018	0.148	47.4%	7.0%
2019	0.131	51.5%	6.7%
Projected			
2020	0.131 ²	52.5% ³	6.9% ⁴
2021	0.131 ²	53.0% ³	6.9% ⁴
2022	0.131 ²	53.3% ³	7.0% ⁴
(d) Projected ULAE Paid to CY2019 Earned Premium Ratio: (67% of 2021 and 33% of 2022 in column (c))			6.9%
(e) Projected Loss to Industry Average Filed Pure Premium Ratio ⁵ :			0.618
(f) Premium Adjustment Factor for Calendar Year 2019 ⁶ :			0.909
(g) Projected Ratio of ULAE to Losses: (d) / [(e) x (f)]			12.3%

Notes:

¹ Based on private insurers ULAE to paid loss ratio. See Exhibit 1.

² Based on 2019 paid ULAE to paid loss ratio.

³ Estimated based on age-to-age paid indemnity and medical development factors from insurers' December 31, 2019 experience.

⁴ (a) x (b).

⁵ See Exhibit 8 of Section B.

⁶ See Exhibit 5.2 of Section B.

Projected Ratio of ULAE to Loss - Statewide

Based on Estimated Calendar Year ULAE Paid per Weighted Open Indemnity Claim for Private Insurers
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

Calendar Year	Weighted Number of Open Indemnity Claims	ULAE Paid per Weighted Open Indemnity Claim	ULAE Paid (\$000)
	(a)	(b)	(c)
2010	594,894	913	542,859
2011	605,973	900	545,458
2012	615,637	906	557,651
2013	642,294	1,156	742,428
2014	652,860	1,043	681,195
2015	669,113	1,307	874,717
2016	666,822	1,593	1,062,547
2017	667,648	1,734	1,157,516
2018	654,983	1,797	1,176,761
2019	643,632	1,600	1,029,872
<u>Projected</u>			
2020	617,124	1,747	1,078,110
2021	612,672	1,793	1,098,422
2022	611,183	1,860	1,136,987

(d) Projected ULAE Paid (\$000): 1,228,383

(e) Calendar Year 2019 Earned Premium (\$000): 16,100,338

(f) Projected Loss to Industry Average Filed Pure Premium Ratio: 0.618

(g) Premium Adjustment Factor for Calendar Year 2019: 0.909

(h) Projected Losses (\$000): (e) x (f) x (g) 9,044,558

(i) Projected Ratio of ULAE to Losses : (d)/(h) 13.6%

Notes:

- Calendar years 2010 to 2019 are based on the number of open indemnity claims and twice the number of reported indemnity claims from WCIRB accident year experience calls. 2020 to 2022 are from line (e), Exhibit 3.4.
- Calendar years 2010 to 2019 are from column (a) of Exhibit 2 divided by columns (b)+[2.0 x (c)] of Exhibit 2.2, multiplied by 1,000,000. Calendar years 2020 to 2022 are projected based on applying the California average annual wage level changes selected by the WCIRB (see Section B, Exhibit 5.1), to the ULAE paid per weighted open indemnity claim from averaging 2018 to 2019.
- Column (a) x column (b).
- Weight average of calendar years 2021 with 67% and 2022 with 33%, projected 3 years to the approximate average midpoint of ultimate ULAE payments on January 1, 2021 to August 31, 2021 policies, based on applying the average annual change of 3.4% for 2022 and 2023 derived from the information published by the UCLA Anderson School of Business and California Department of Finance.
- Based on the reported earned premium from the same group of insurers that reported the number of open indemnity claims in calendar year 2019.
- See Exhibit 8 of Section B.
- See Exhibit 5.2 of Section B.

Average Paid ALAE^[1] per Reported Indemnity Claim - Private Insurers

As of March 31, 2020

Accident	Evaluated as of (in months):								
Year	15	27	39	51	63	75	87	99	111
2000							4,340	4,548	4,786
2001						5,159	5,480	5,819	6,017
2002					5,264	5,668	6,064	6,308	6,493
2003				4,907	5,528	6,043	6,383	6,647	6,869
2004			3,570	4,548	5,212	5,673	6,022	6,283	6,495
2005		2,083	3,279	4,191	4,833	5,307	5,673	5,965	6,175
2006	797	2,176	3,410	4,328	5,022	5,550	5,920	6,211	6,471
2007	849	2,340	3,613	4,619	5,393	5,993	6,429	6,768	7,039
2008	944	2,494	3,933	5,103	5,975	6,595	7,096	7,468	7,729
2009	1,037	2,812	4,448	5,718	6,637	7,358	7,900	8,278	8,553
2010	1,111	2,981	4,586	5,816	6,746	7,484	7,978	8,319	8,566
2011	1,127	2,942	4,520	5,796	6,818	7,470	7,939	8,265	8,373
2012	1,120	3,012	4,721	6,067	6,965	7,585	7,985	8,271	
2013	1,202	3,276	4,985	6,201	7,014	7,540	7,898		
2014	1,340	3,480	5,147	6,288	7,009	7,498			
2015	1,424	3,577	5,185	6,234	6,903				
2016	1,443	3,640	5,215	6,220					
2017	1,524	3,737	5,231						
2018	1,629	3,856							
2019	1,639								

Accident	Annual Change								
Year	15	27	39	51	63	75	87	99	111
2001							26.3%	27.9%	25.7%
2002						9.9%	10.7%	8.4%	7.9%
2003					5.0%	6.6%	5.2%	5.4%	5.8%
2004				-7.3%	-5.7%	-6.1%	-5.6%	-5.5%	-5.5%
2005			-8.1%	-7.8%	-7.3%	-6.5%	-5.8%	-5.0%	-4.9%
2006		4.4%	4.0%	3.3%	3.9%	4.6%	4.4%	4.1%	4.8%
2007	6.5%	7.5%	5.9%	6.7%	7.4%	8.0%	8.6%	9.0%	8.8%
2008	11.3%	6.6%	8.9%	10.5%	10.8%	10.0%	10.4%	10.3%	9.8%
2009	9.8%	12.8%	13.1%	12.0%	11.1%	11.6%	11.3%	10.8%	10.7%
2010	7.1%	6.0%	3.1%	1.7%	1.6%	1.7%	1.0%	0.5%	0.2%
2011	1.4%	-1.3%	-1.4%	-0.3%	1.1%	-0.2%	-0.5%	-0.6%	-2.3%
2012	-0.5%	2.4%	4.4%	4.7%	2.1%	1.5%	0.6%	0.1%	
2013	7.3%	8.8%	5.6%	2.2%	0.7%	-0.6%	-1.1%		
2014	11.5%	6.2%	3.3%	1.4%	-0.1%	-0.6%			
2015	6.3%	2.8%	0.7%	-0.9%	-1.5%				
2016	1.3%	1.8%	0.6%	-0.2%					
2017	5.6%	2.7%	0.3%						
2018	6.9%	3.2%							
2019	0.6%								

Annual Trend^[2]

All-Year	5.6%	4.9%	4.0%	3.2%	3.1%	3.3%	4.0%	4.3%	4.3%
R ³	0.975	0.961	0.915	0.796	0.779	0.817	0.815	0.814	0.805
5-Year	4.1%	2.5%	1.1%	0.6%	0.3%	0.1%	0.0%	2.0%	4.6%
R ⁴	0.938	0.992	0.837	0.427	0.171	0.110	0.000	0.477	0.705

^[1] All paid ALAE exclude the paid cost of medical cost containment programs.^[2] Trend is based on exponential distribution.

Source: WCIRB accident year experience calls.

Ratio of Paid ALAE to Paid Loss - Private Insurers

As of March 31, 2020

Accident	Evaluated as of (in months):								
Year	15	27	39	51	63	75	87	99	111
2000							0.107	0.107	0.109
2001						0.118	0.119	0.121	0.122
2002					0.132	0.134	0.137	0.137	0.138
2003				0.136	0.141	0.144	0.146	0.147	0.148
2004			0.139	0.150	0.155	0.158	0.159	0.160	0.160
2005		0.113	0.133	0.144	0.149	0.152	0.154	0.155	0.154
2006	0.076	0.112	0.129	0.138	0.143	0.146	0.148	0.148	0.150
2007	0.077	0.112	0.127	0.135	0.142	0.145	0.146	0.148	0.148
2008	0.078	0.110	0.126	0.136	0.141	0.143	0.146	0.147	0.148
2009	0.084	0.122	0.138	0.146	0.150	0.153	0.155	0.157	0.158
2010	0.092	0.130	0.143	0.148	0.152	0.156	0.158	0.159	0.160
2011	0.099	0.133	0.146	0.154	0.162	0.165	0.167	0.168	0.166
2012	0.098	0.138	0.155	0.166	0.170	0.173	0.174	0.172	
2013	0.109	0.154	0.168	0.174	0.179	0.181	0.183		
2014	0.121	0.163	0.172	0.177	0.180	0.182			
2015	0.128	0.163	0.171	0.175	0.178				
2016	0.124	0.165	0.174	0.178					
2017	0.128	0.166	0.173						
2018	0.130	0.166							
2019	0.132								

Accident	Annual Change								
Year	15	27	39	51	63	75	87	99	111
2001							11.6%	13.2%	12.4%
2002						13.7%	14.7%	13.2%	13.4%
2003					7.2%	7.7%	6.9%	7.3%	7.1%
2004				10.1%	10.1%	9.3%	9.2%	8.5%	7.9%
2005			-4.0%	-4.1%	-3.8%	-3.3%	-3.2%	-3.0%	-3.5%
2006		-1.2%	-3.5%	-4.2%	-4.3%	-4.2%	-4.0%	-4.2%	-2.8%
2007	1.8%	0.1%	-1.7%	-1.8%	-0.8%	-0.7%	-1.2%	-0.6%	-1.1%
2008	0.5%	-1.5%	-0.4%	0.5%	-0.2%	-1.1%	-0.4%	-0.3%	-0.1%
2009	8.7%	10.4%	9.6%	7.8%	6.0%	6.6%	6.5%	6.4%	6.2%
2010	9.0%	7.2%	3.2%	1.0%	1.7%	2.3%	1.8%	1.7%	1.6%
2011	7.1%	2.1%	2.4%	4.4%	6.2%	5.2%	5.6%	5.2%	3.6%
2012	-0.5%	3.6%	6.1%	7.6%	5.3%	5.3%	4.6%	2.8%	
2013	10.8%	11.5%	8.5%	4.9%	4.9%	4.5%	4.8%		
2014	11.4%	6.3%	2.3%	1.4%	0.5%	0.2%			
2015	5.8%	-0.2%	-0.5%	-1.0%	-1.0%				
2016	-2.8%	1.0%	1.6%	1.9%					
2017	2.6%	0.8%	-0.4%						
2018	2.2%	0.1%							
2019	1.1%								

Note: All paid ALAE exclude the paid cost of medical cost containment programs. Accident years 2010 and prior paid loss include the paid cost of medical cost containment programs.

Source: WCIRB accident year experience calls.

Estimated Ultimate ALAE per Indemnity Claim - Private Insurers

Acc. Year	Paid ALAE ^[1] @3/31/20 (in \$000) (1)	Cumulative Development Factors ^[2] (2)	Estimated Ultimate ALAE (in \$000) (3)=(1)x(2)	Indemnity Claim Counts @3/31/20 (4)	Cumulative Count Development Factors ^[3] (5)	Estimated Ultimate Ind. Counts (6)=(4)x(5)	Estimated Ultimate ALAE per Indemnity Claim (7)=(3)/(6)x1000	Annual Change (8)
1992	319,500	1.046	334,100	141,778	1.000	141,835	2,356	---
1993	237,657	1.048	249,159	113,438	1.000	113,488	2,195	-6.8%
1994	220,447	1.052	231,886	105,344	1.001	105,407	2,200	0.2%
1995	243,512	1.055	256,982	101,353	1.001	101,432	2,534	15.2%
1996	290,233	1.061	307,815	103,158	1.001	103,271	2,981	17.6%
1997	367,228	1.066	391,294	104,809	1.001	104,942	3,729	25.1%
1998	506,049	1.071	542,018	112,438	1.002	112,616	4,813	29.1%
1999	556,256	1.076	598,794	116,374	1.002	116,589	5,136	6.7%
2000	660,396	1.082	714,419	118,393	1.002	118,638	6,022	17.2%
2001	784,972	1.088	854,111	113,942	1.002	114,187	7,480	24.2%
2002	823,305	1.096	901,946	113,022	1.002	113,294	7,961	6.4%
2003	832,721	1.103	918,677	108,378	1.003	108,748	8,448	6.1%
2004	715,175	1.111	794,749	99,465	1.004	99,842	7,960	-5.8%
2005	673,613	1.120	754,393	97,339	1.004	97,726	7,719	-3.0%
2006	740,252	1.132	838,066	104,330	1.004	104,756	8,000	3.6%
2007	816,727	1.143	933,778	107,476	1.005	107,965	8,649	8.1%
2008	867,745	1.157	1,004,137	105,669	1.005	106,217	9,454	9.3%
2009	901,915	1.175	1,059,788	101,069	1.006	101,653	10,426	10.3%
2010	955,932	1.196	1,143,140	109,080	1.006	109,749	10,416	-0.1%
2011	963,643	1.222	1,177,281	113,318	1.007	114,104	10,318	-0.9%
2012	1,010,697	1.255	1,268,311	121,770	1.008	122,698	10,337	0.2%
2013	1,015,314	1.304	1,324,077	128,412	1.009	129,510	10,224	-1.1%
2014	981,854	1.369	1,343,783	130,892	1.010	132,251	10,161	-0.6%
2015	931,851	1.454	1,354,687	134,991	1.013	136,757	9,906	-2.5%
2016	868,944	1.611	1,400,087	139,710	1.018	142,207	9,845	-0.6%
2017	733,276	1.908	1,399,424	140,159	1.025	143,676	9,740	-1.1%
2018	543,949	2.725	1,482,311	141,063	1.045	147,467	10,052	3.2%
2019	215,744	7.088	1,529,092	131,619	1.148	151,149	10,116	0.6%

Estimated Annual Exponential Trend Based on:

R²

2006 to 2019 0.9% 0.263

2015 to 2019 0.6% 0.417

Average: 0.8%

Notes:

^[1] All paid ALAE exclude the paid cost of medical cost containment programs.^[2] Based on the latest year paid ALAE age-to-age development from Exhibit 11.1 adjusted for change in claim settlement ratios.^[3] Based on analogous Exhibit 11.3, applicable to private insurers only.

**Ratio of Accident Year Incremental Paid ALAE^[1] to Indemnity Claims Inventory^[2]
by Payment Year - Private Insurers**

Acc. Year	Payment Year Ending March 31														
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1989	635	1,143	1,062	1,029	1,125	1,143	1,344	1,524	1,471	1,493	1,610	1,948	1,412	1,569	1,748
1990	987	2,157	1,139	1,274	1,193	1,355	1,542	1,432	1,812	1,590	1,600	1,828	1,643	1,790	1,987
1991	834	1,697	1,577	1,256	1,495	1,388	1,574	1,438	1,789	1,645	1,558	2,144	2,117	1,932	1,847
1992	1,416	1,837	1,653	1,405	1,827	1,389	1,669	1,502	1,636	1,576	1,811	1,682	1,856	1,900	2,277
1993	1,502	2,157	1,833	1,541	1,927	1,664	1,886	1,800	1,951	1,979	2,169	2,268	2,292	2,148	2,147
1994	1,686	1,932	1,717	1,617	1,646	1,576	1,632	1,833	1,663	2,106	1,790	1,802	1,628	1,696	1,620
1995	1,671	1,766	1,849	1,766	1,916	1,772	1,672	2,033	2,051	2,107	2,075	2,374	1,999	2,145	2,058
1996	2,027	1,997	1,979	1,947	1,946	1,686	2,011	2,085	2,144	2,076	2,297	2,097	1,888	2,236	2,093
1997	2,378	2,409	2,347	2,287	2,314	2,225	2,414	2,353	2,147	2,224	2,127	2,259	2,315	2,382	2,258
1998	2,556	2,484	2,502	2,336	2,432	2,381	2,277	2,340	2,344	2,292	2,459	2,325	2,527	2,387	2,040
1999	2,529	2,629	2,403	2,646	2,804	2,545	2,698	2,641	2,332	2,118	2,342	2,502	2,104	2,225	1,975
2000	2,525	2,805	2,720	2,864	2,854	2,740	2,803	2,842	2,539	2,536	2,749	2,592	2,529	2,217	2,220
2001	2,284	2,764	2,811	2,873	2,654	2,736	2,755	2,778	2,801	3,292	3,155	2,647	2,618	2,510	2,650
2002	2,537	2,873	2,910	3,083	2,899	2,967	3,021	2,915	3,015	3,432	3,203	3,165	3,126	2,837	3,115
2003	2,577	2,881	2,947	3,058	3,032	3,216	3,224	3,546	3,397	3,589	3,547	3,127	2,941	2,812	3,225
2004	2,100	2,676	3,009	3,077	3,145	3,263	3,130	3,060	3,306	3,584	3,248	3,032	2,945	2,923	2,973
2005	768	1,986	2,649	2,916	3,070	3,251	3,284	3,317	3,438	3,609	3,729	3,449	3,516	3,277	3,523
2006	106	782	2,162	2,758	2,992	3,243	3,474	3,296	3,404	3,583	3,365	3,161	3,254	2,942	2,726
2007		71	846	2,333	2,807	3,192	3,452	3,603	3,686	3,677	3,719	3,540	3,460	3,516	3,183
2008			85	939	2,399	3,110	3,500	3,591	3,702	3,835	3,887	3,713	3,718	3,654	3,652
2009				150	1,034	2,742	3,391	3,644	3,820	3,943	3,998	3,903	3,810	3,777	3,632
2010					87	1,129	2,898	3,450	3,743	3,893	4,073	4,097	4,004	3,993	3,920
2011						88	1,147	2,879	3,459	3,863	4,060	4,043	4,186	4,165	3,901
2012							90	1,147	3,007	3,677	3,952	4,069	4,177	4,030	4,398
2013								101	1,237	3,223	3,649	3,913	4,062	4,095	4,170
2014									144	1,378	3,284	3,739	3,917	3,985	4,216
2015										105	1,426	3,353	3,753	3,934	4,132
2016											108	1,443	3,487	3,904	4,094
2017												121	1,523	3,622	3,931
2018													142	1,628	3,679
2019														149	1,634
															152
ALAE per Claim	1,846	1,951	1,977	2,104	2,184	2,354	2,506	2,565	2,670	2,857	2,895	2,899	2,946	2,988	3,017
Annual Change	-8.3%	5.7%	1.4%	6.4%	3.8%	7.8%	6.5%	2.4%	4.1%	7.0%	1.3%	0.1%	1.6%	1.4%	1.0%

Estimated Annual Exponential Trend Based on Payment Year: **R²**

2006-2020 3.8% 0.940

2015-2020 0.8% 0.885

Average: 2.3%

^[1] All paid ALAE exclude the paid cost of medical cost containment programs.

^[2] Indemnity claims inventory is the sum of indemnity claims open as of April 1 of Year N-1 and newly-reported indemnity claims between April 1 of year N-1 and March 31 of year N.

Source: WCIRB quarterly calls for experience.

Paid Allocated Loss Adjustment Expense Development - Private Insurers
As of March 31, 2020

Accident Year	Age-to-Age Development (in months):															
	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159	159-171	171-183	183-195	195-207
1989					1.102	1.079	1.040	1.026	1.017	1.011	1.007	1.004	1.005	1.005	1.004	1.005
1990				1.149	1.097	1.046	1.032	1.020	1.014	1.009	1.007	1.006	1.005	1.005	1.006	1.006
1991			1.252	1.128	1.062	1.047	1.025	1.017	1.012	1.007	1.007	1.005	1.005	1.005	1.006	1.005
1992		1.512	1.229	1.102	1.074	1.045	1.027	1.018	1.011	1.009	1.007	1.007	1.008	1.005	1.006	1.005
1993	2.417	1.527	1.218	1.127	1.076	1.047	1.032	1.028	1.017	1.014	1.010	1.012	1.011	1.009	1.008	1.006
1994	2.485	1.498	1.231	1.117	1.082	1.045	1.036	1.023	1.020	1.014	1.019	1.017	1.013	1.011	1.008	1.007
1995	2.550	1.569	1.237	1.132	1.072	1.046	1.038	1.030	1.022	1.022	1.019	1.017	1.015	1.013	1.010	1.008
1996	2.454	1.490	1.239	1.114	1.072	1.056	1.046	1.036	1.031	1.026	1.021	1.017	1.014	1.008	1.011	1.009
1997	2.424	1.511	1.194	1.112	1.081	1.064	1.051	1.040	1.033	1.025	1.020	1.016	1.013	1.013	1.011	1.009
1998	2.618	1.463	1.229	1.139	1.102	1.083	1.055	1.041	1.028	1.023	1.020	1.018	1.014	1.013	1.011	1.011
1999	2.514	1.559	1.256	1.152	1.111	1.076	1.058	1.039	1.033	1.027	1.020	1.018	1.015	1.013	1.011	1.011
2000	2.801	1.593	1.262	1.166	1.110	1.079	1.051	1.042	1.030	1.024	1.020	1.018	1.015	1.013	1.013	1.010
2001	3.053	1.597	1.291	1.156	1.108	1.075	1.052	1.034	1.028	1.023	1.019	1.016	1.017	1.014	1.010	1.009
2002	2.790	1.592	1.261	1.153	1.102	1.064	1.040	1.031	1.025	1.020	1.017	1.016	1.013	1.011	1.009	1.007
2003	2.931	1.550	1.267	1.155	1.089	1.057	1.042	1.032	1.028	1.022	1.019	1.017	1.012	1.009	1.007	1.007
2004	2.785	1.573	1.283	1.149	1.090	1.064	1.045	1.033	1.029	1.024	1.019	1.014	1.011	1.009	1.008	
2005	2.746	1.599	1.285	1.157	1.104	1.072	1.052	1.042	1.032	1.027	1.019	1.016	1.012	1.011		
2006	2.878	1.591	1.278	1.165	1.108	1.075	1.056	1.043	1.032	1.023	1.018	1.013	1.010			
2007	2.902	1.570	1.291	1.173	1.116	1.081	1.054	1.042	1.029	1.021	1.017	1.012				
2008	2.832	1.621	1.311	1.177	1.115	1.077	1.055	1.037	1.027	1.020	1.015					
2009	3.005	1.623	1.302	1.178	1.112	1.076	1.049	1.034	1.025	1.018						
2010	2.944	1.591	1.295	1.166	1.108	1.068	1.044	1.030	1.022							
2011	2.945	1.597	1.298	1.169	1.097	1.065	1.042	1.027								
2012	3.060	1.610	1.288	1.154	1.092	1.055	1.039									
2013	3.024	1.554	1.255	1.137	1.078	1.049										
2014	2.902	1.512	1.234	1.120	1.073											
2015	2.785	1.478	1.211	1.113												
2016	2.796	1.466	1.201													
2017	2.684	1.428														
2018	2.601															
<u>Latest Year</u>																
Age-to-Age	2.601	1.428	1.201	1.113	1.073	1.049	1.039	1.027	1.022	1.018	1.015	1.012	1.010	1.011	1.008	1.007
Cumulative	7.285	2.801	1.962	1.633	1.468	1.369	1.304	1.255	1.222	1.196	1.175	1.157	1.143	1.132	1.120	1.111
Adjusted ^[1]	7.088	2.725	1.908	1.611	1.454	---	---	---	---	---	---	---	---	---	---	---
<u>3-Year Arithmetic Average</u>																
Age-to-Age	2.694	1.457	1.216	1.123	1.081	1.057	1.042	1.030	1.024	1.020	1.017	1.014	1.011	1.010	1.008	1.008
Cumulative	8.115	3.012	2.067	1.701	1.514	1.400	1.326	1.272	1.235	1.205	1.182	1.162	1.147	1.134	1.123	1.114
<u>Accident Year</u>																
	207-219	219-231	231-243	243-255	255-267	267-279	279-291	291-303	303-315	315-327	327-339	339-351	351-363	363-375	375-387	387-399
1987	1.004	1.006	1.006	1.008	1.004	1.004	1.006	1.005	1.004	1.005	1.006	1.004	1.004	1.003	1.004	1.003
1988	1.004	1.005	1.005	1.005	1.003	1.005	1.004	1.004	1.005	1.004	1.004	1.003	1.003	1.003	1.003	
1989	1.004	1.004	1.004	1.003	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.003	1.005	1.003		
1990	1.004	1.004	1.002	1.003	1.003	1.003	1.003	1.003	1.002	1.003	1.002	1.002	1.002			
1991	1.003	1.002	1.003	1.003	1.003	1.003	1.003	1.002	1.003	1.003	1.002	1.002				
1992	1.003	1.004	1.004	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003					
1993	1.006	1.007	1.006	1.006	1.005	1.005	1.005	1.004	1.004	1.003						
1994	1.007	1.007	1.006	1.007	1.005	1.005	1.004	1.004	1.003							
1995	1.009	1.009	1.008	1.007	1.008	1.006	1.006	1.005								
1996	1.009	1.008	1.008	1.006	1.005	1.006	1.005									
1997	1.008	1.008	1.007	1.006	1.006	1.005										
1998	1.011	1.009	1.008	1.006	1.005											
1999	1.009	1.007	1.007	1.005												
2000	1.008	1.007	1.006													
2001	1.007	1.007														
2002	1.007															
<u>Latest Year</u>																
Age-to-Age	1.007	1.007	1.006	1.005	1.005	1.005	1.005	1.005	1.003	1.003	1.003	1.002	1.002	1.003	1.004	1.003
Cumulative ^[2]	1.103	1.096	1.088	1.082	1.076	1.071	1.066	1.061	1.055	1.052	1.048	1.046	1.043	1.040	1.038	
<u>3-Year Arithmetic Average</u>																
Age-to-Age	1.008	1.007	1.007	1.006	1.005	1.006	1.005	1.004	1.003	1.003	1.002	1.002	1.003	1.003	1.003	1.003
Cumulative ^[2]	1.105	1.097	1.090	1.082	1.076	1.070	1.064	1.059	1.055	1.051	1.048	1.046	1.043	1.040	1.038	

Note:

^[1] The paid ALAE factors are adjusted for the increase in claim settlement rates for accident years 2015 to 2017. See Item AC19-08-04 of the August 4, 2020 WCIRB Actuarial Committee Agenda.^[2] Factors in italics are based on powerfit to the "3-Year Arithmetic Average" factors.

Source: WCIRB accident year experience calls. Excludes MCCC costs.

Quarterly Paid ALAE Loss Development Factors^[1] - Private Insurers

Age in Months		<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
3	- 6		7.976	7.570	5.434	9.136	8.769	8.693	8.584	6.234	9.866	8.946	8.934	8.191	7.885
6	- 9	2.427	3.016	2.765	2.630	3.023	3.176	3.213	3.058	3.163	3.173	3.144	3.064	3.161	3.139
9	- 12	2.022	2.078	2.021	2.034	2.077	2.165	2.115	2.133	2.158	2.107	2.101	2.137	2.091	2.131
12	- 15	1.653	1.627	1.687	1.724	1.737	1.701	1.713	1.784	1.744	1.734	1.776	1.701	1.672	1.675
15	- 18	1.415	1.486	1.494	1.509	1.482	1.486	1.510	1.494	1.488	1.482	1.491	1.451	1.442	
18	- 21	1.357	1.328	1.289	1.326	1.334	1.343	1.338	1.349	1.332	1.309	1.309	1.311	1.289	
21	- 24	1.255	1.234	1.237	1.255	1.253	1.248	1.249	1.237	1.239	1.225	1.227	1.227	1.213	
24	- 27	1.187	1.191	1.190	1.197	1.189	1.186	1.205	1.187	1.177	1.184	1.167	1.150	1.153	
27	- 30	1.165	1.167	1.172	1.170	1.158	1.163	1.160	1.156	1.151	1.142	1.132	1.129		
30	- 33	1.128	1.119	1.135	1.138	1.133	1.131	1.130	1.123	1.116	1.110	1.109	1.099		
33	- 36	1.107	1.103	1.111	1.114	1.113	1.108	1.104	1.101	1.095	1.088	1.092	1.084		
36	- 39	1.093	1.090	1.097	1.094	1.091	1.095	1.093	1.085	1.085	1.073	1.068	1.062		
39	- 42	1.083	1.086	1.096	1.082	1.083	1.081	1.081	1.077	1.072	1.062	1.062			
42	- 45	1.063	1.069	1.069	1.074	1.069	1.068	1.070	1.061	1.057	1.054	1.049			
45	- 48	1.057	1.059	1.063	1.064	1.062	1.059	1.057	1.055	1.051	1.046	1.043			
48	- 51	1.050	1.050	1.052	1.053	1.053	1.051	1.050	1.047	1.041	1.036	1.035			
51	- 54	1.049	1.050	1.049	1.050	1.048	1.048	1.046	1.042	1.035	1.034				
54	- 57	1.038	1.043	1.045	1.043	1.040	1.043	1.038	1.035	1.031	1.027				
57	- 60	1.037	1.038	1.039	1.039	1.037	1.036	1.035	1.031	1.028	1.026				
60	- 63	1.032	1.032	1.034	1.034	1.032	1.031	1.031	1.025	1.023	1.021				
63	- 66	1.030	1.031	1.033	1.032	1.032	1.029	1.028	1.022	1.021					
66	- 69	1.027	1.029	1.028	1.029	1.028	1.024	1.024	1.021	1.018					
69	- 72	1.025	1.028	1.026	1.026	1.024	1.023	1.021	1.018	1.018					
72	- 75	1.022	1.023	1.023	1.022	1.021	1.021	1.019	1.016	1.015					
75	- 78	1.020	1.023	1.022	1.022	1.020	1.019	1.016	1.015						
78	- 81	1.019	1.020	1.020	1.020	1.017	1.017	1.015	1.013						
81	- 84	1.018	1.019	1.018	1.017	1.016	1.014	1.014	1.012						
84	- 87	1.016	1.016	1.016	1.015	1.014	1.014	1.011	1.010						
87	- 90	1.015	1.015	1.016	1.015	1.012	1.012	1.011							
90	- 93	1.014	1.014	1.014	1.012	1.012	1.012	1.011							
93	- 96	1.013	1.013	1.013	1.012	1.010	1.011	1.009							
96	- 99	1.012	1.011	1.011	1.010	1.010	1.008	1.008							
99	- 102	1.012	1.012	1.011	1.009	1.009	1.008								
102	- 105	1.012	1.011	1.009	1.009	1.008	1.007								
105	- 108	1.010	1.010	1.008	1.008	1.007	1.007								
108	- 111	1.009	1.009	1.008	1.008	1.006	1.005								
111	- 114	1.009	1.008	1.007	1.007	1.006									
114	- 117	1.008	1.007	1.007	1.007	1.006									
117	- 120	1.008	1.007	1.006	1.006	1.006									
120	- 123	1.007	1.006	1.006	1.006	1.006									

^[1] All paid allocated loss adjustment expense exclude the paid cost of medical cost containment programs.

Source: WCIRB quarterly calls for experience.

Reported Indemnity Claim Count Development - Statewide

Accident	Age-to-Age Development (in months):														
Year	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159	159-171	171-183	183-195
1992															1.000
1993														1.000	1.000
1994													1.000	1.000	1.000
1995												1.000	1.000	1.001	1.001
1996											1.001	1.000	1.000	1.000	1.000
1997										1.000	1.000	1.000	1.000	1.000	1.000
1998									1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999								1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000
2000							1.000	1.000	1.000	1.000	1.000	1.001	1.001	1.000	1.000
2001						1.000	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002					1.000	1.000	0.999	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000
2003				1.000	0.998	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004			1.000	1.000	0.999	0.999	0.999	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000
2005		1.005	1.001	1.001	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2006	1.029	1.008	1.004	1.002	1.001	1.001	1.000	1.001	1.001	1.000	1.000	1.000	1.000		
2007	1.036	1.012	1.006	1.003	1.002	1.000	1.000	1.001	1.000	1.000	1.000	1.000			
2008	1.059	1.017	1.009	1.004	1.003	1.002	1.001	1.001	1.000	1.000	1.000				
2009	1.083	1.023	1.009	1.005	1.003	1.002	1.001	1.000	1.000	1.000					
2010	1.091	1.022	1.010	1.006	1.003	1.002	1.001	1.000	1.000						
2011	1.102	1.027	1.011	1.005	1.002	1.001	1.000	1.000							
2012	1.120	1.026	1.010	1.005	1.002	1.001	1.001								
2013	1.101	1.024	1.007	1.004	1.001	1.002									
2014	1.105	1.019	1.008	1.003	1.001										
2015	1.100	1.016	1.005	1.003											
2016	1.101	1.019	1.005												
2017	1.088	1.017													
2018	1.092														

I. Age-to-Age (Latest Year)

1.092	1.0170	1.005	1.003	1.001	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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II. Age-to-Ultimate

1.127	1.032	1.015	1.010	1.007	1.006	1.004	1.003	1.003	1.002	1.002	1.002	1.002	1.002	1.002	1.002
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Acciden	Age-to-Age Development (in months):														
Year	195-207	207-219	219-231	231-243	243-255	255-267	267-279	279-291	291-303	303-315	315-327	327-339	339-351	351-363	
1989	1.001	0.996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000					
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000						
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000							
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000								
1998	1.000	1.000	1.000	1.000	1.000	1.000									
1999	1.000	1.000	1.000	1.000	1.000										
2000	1.000	1.000	1.000	1.000											
2001	1.000	1.000	1.000												
2002	1.000	1.000													
2003	1.000														

I. Age-to-Age (Latest Year)

1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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II. Age-to-Ultimate

1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000
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Source: WCIRB quarterly calls for experience.

Projected Ratio of ALAE^[1] to Losses - StatewideBased on Estimated Accident Year Indemnity Claim Frequency and Private Insurers ALAE Severity
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

Acc. Year	Indemnity Claim Counts @3/31/20	Cumulative Count Development Factors ^[2]	Estimated Ultimate Ind. Counts (3)=(1)x(2)	Estimated Ult. ALAE per Indemnity Claim ^[3]	Estimated Ult. ALAE (in \$000) (5)=(3)x(4)
	(1)	(2)	(3)=(1)x(2)	(4)	(5)=(3)x(4)
1992	198,294	1.000	198,338	2,356	467,195
1993	156,047	1.000	156,089	2,195	342,687
1994	143,658	1.000	143,716	2,200	316,164
1995	135,198	1.001	135,272	2,534	342,718
1996	133,121	1.001	133,225	2,981	397,099
1997	137,369	1.001	137,491	3,729	512,659
1998	147,457	1.001	147,619	4,813	710,488
1999	148,655	1.001	148,848	5,136	764,471
2000	161,931	1.001	162,162	6,022	976,515
2001	185,637	1.001	185,897	7,480	1,390,496
2002	194,719	1.001	195,004	7,961	1,552,451
2003	184,181	1.002	184,542	8,448	1,558,971
2004	158,951	1.002	159,245	7,960	1,267,600
2005	139,548	1.002	139,802	7,719	1,079,199
2006	133,284	1.002	133,503	8,000	1,068,047
2007	130,331	1.002	130,556	8,649	1,129,168
2008	123,059	1.002	123,296	9,454	1,165,599
2009	113,867	1.002	114,132	10,426	1,189,891
2010	118,755	1.002	119,042	10,416	1,239,930
2011	120,971	1.003	121,316	10,318	1,251,691
2012	128,131	1.003	128,546	10,337	1,328,762
2013	136,242	1.004	136,754	10,224	1,398,138
2014	141,062	1.005	141,833	10,161	1,441,149
2015	144,972	1.007	145,971	9,906	1,445,959
2016	147,920	1.010	149,379	9,845	1,470,696
2017	147,678	1.015	149,895	9,740	1,459,994
2018	148,356	1.032	153,171	10,052	1,539,646
2019	139,039	1.127	156,731	10,116	1,585,559

Projected Based on 2-Year Average of 2018 and 2019:

	Ult. Ind. Counts ^[4]	Ult. ALAE per Ind. Counts ^[5]	Ultimate ALAE ^[6]
2020	145,050	10,312	1,495,737
2021	145,775	10,467	1,525,764
11/1/2021	145,775	10,518	1,533,279

(a) Projected ALAE Incurred (\$000):	1,533,279
(b) Calendar Year 2019 Earned Premium ^[7] (\$000):	16,100,338
(c) Projected Loss to Industry Average Filed Pure Premium Ratio ^[8] :	0.618
(d) Premium Adjustment Factor for Calendar Year 2019 ^[9] :	0.909
(e) Projected Losses (\$000): (b) x (c) x (d)	9,044,558
(f) Ratio of ALAE to Losses Prior to Impact of SB 1160 and AB 1244: (a)/(e)	17.0%
(g) Impact of SB 1160 and AB 1244 ^[10]	-4.8%
(h) Projected Ratio of ALAE to Losses after Impact of SB 1160 and AB 1244: (f) x [1.0 + (g)]	16.1%

Notes:^[1] All paid ALAE exclude the paid cost of medical cost containment programs.^[2] Based on the latest year indemnity claim count age-to-age development from Exhibit 11.3.^[3] Based on estimated ultimate ALAE per indemnity for private insurers from Exhibit 9.^[4] Estimated based on projected frequency trends for accident years 2019 to 2022. The estimated frequency changes are based on the projected growth in intra-class indemnity claim frequency (see Section B, Exhibit 6.1). These frequency trends were then applied to the ultimate indemnity claim counts estimated from averaging 2018 and 2019.^[5] Severity is projected by applying an annual growth rate of 1.5%, which is based on the approximate average of the private insurers selected rate of growth in (i) estimated ultimate accident year ALAE severities from Exhibit 9 and (ii) paid ALAE per open indemnity claim from Exhibit 10, to the ultimate ALAE severity estimated from averaging 2018 and 2019.^[6] Column(3) x Column(4) / 1,000.^[7] Based on the reported earned premium for calendar year 2019 from the same group of insurers that reported the paid ALAE in column (1) and the indemnity claim counts in column (4) by accident year as of March 31, 2020.^[8] See Exhibit 8 of Section B.^[9] See Exhibit 5.2 of Section B.^[10] Based on the WCIRB's most recent evaluation of SB 1160 and AB 1244 reflecting a 60% reduction in lien filings, offset by 50% to reflect the impact of the reforms in the emerging ALAE data.

Projected Ratio of ALAE^[1] to Losses - StatewideBased on Estimated Accident Year Indemnity Claim Frequency and Private Insurers ALAE Severity - Trend from Latest Year
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

Acc. Year	Indemnity Claim Counts @3/31/20	Cumulative Count Development Factors ^[2]	Estimated Ultimate Ind. Counts (3)=(1)x(2)	Estimated Ult. ALAE per Indemnity Claim ^[3]	Estimated Ult. ALAE (in \$000) (5)=(3)x(4)
	(1)	(2)		(4)	
1992	198,294	1.000	198,338	2,356	467,195
1993	156,047	1.000	156,089	2,195	342,687
1994	143,658	1.000	143,716	2,200	316,164
1995	135,198	1.001	135,272	2,534	342,718
1996	133,121	1.001	133,225	2,981	397,099
1997	137,369	1.001	137,491	3,729	512,659
1998	147,457	1.001	147,619	4,813	710,488
1999	148,655	1.001	148,848	5,136	764,471
2000	161,931	1.001	162,162	6,022	976,515
2001	185,637	1.001	185,897	7,480	1,390,496
2002	194,719	1.001	195,004	7,961	1,552,451
2003	184,181	1.002	184,542	8,448	1,558,971
2004	158,951	1.002	159,245	7,960	1,267,600
2005	139,548	1.002	139,802	7,719	1,079,199
2006	133,284	1.002	133,503	8,000	1,068,047
2007	130,331	1.002	130,556	8,649	1,129,168
2008	123,059	1.002	123,296	9,454	1,165,599
2009	113,867	1.002	114,132	10,426	1,189,891
2010	118,755	1.002	119,042	10,416	1,239,930
2011	120,971	1.003	121,316	10,318	1,251,691
2012	128,131	1.003	128,546	10,337	1,328,762
2013	136,242	1.004	136,754	10,224	1,398,138
2014	141,062	1.005	141,833	10,161	1,441,149
2015	144,972	1.007	145,971	9,906	1,445,959
2016	147,920	1.010	149,379	9,845	1,470,696
2017	147,678	1.015	149,895	9,740	1,459,994
2018	148,356	1.032	153,171	10,052	1,539,646
2019	139,039	1.127	156,731	10,116	1,585,559

Projected Based on Latest Year

	Ult. Ind. Counts ^[4]	Ult. ALAE per Ind. Counts ^[5]	Ultimate ALAE ^[6]
2020	146,073	10,268	1,499,907
2021	146,803	10,422	1,530,018
11/1/2021	146,803	10,474	1,537,554
(a) Projected ALAE Incurred (\$000):			1,537,554
(b) Calendar Year 2019 Earned Premium ^[7] (\$000):			16,100,338
(c) Projected Loss to Industry Average Filed Pure Premium Ratio ^[8] :			0.618
(d) Premium Adjustment Factor for Calendar Year 2019 ^[9] :			0.909
(e) Projected Losses (\$000): (b) x (c) x (d)			9,044,558
(f) Ratio of ALAE to Losses Prior to Impact of SB 1160 and AB 1244: (a)/(e)			17.0%
(g) Impact of SB 1160 and AB 1244 ^[10] :			-4.8%
(h) Projected Ratio of ALAE to Losses after Impact of SB 1160 and AB 1244: (f) x [1.0 + (g)]			16.2%

Notes:^[1] All paid ALAE exclude the paid cost of medical cost containment programs.^[2] Based on the latest year indemnity claim count age-to-age development from Exhibit 11.3.^[3] Based on estimated ultimate ALAE per indemnity for private insurers from Exhibit 9.^[4] Estimated based on projected frequency trends for accident years 2020 and 2022. The estimated frequency changes are based on the projected growth in intra-class indemnity claim frequency (see Section B, Exhibit 6.1). These frequency trends were then applied to the 2019 ultimate indemnity claim counts.^[5] Severity is projected by applying an annual growth rate of 1.5%, which is based on the approximate average of the private insurers selected rate of growth in (i) estimated ultimate accident year ALAE severities from Exhibit 9 and (ii) paid ALAE per open indemnity claim from Exhibit 10, to the 2019 ultimate ALAE severity.^[6] Column(3) x Column(4) / 1,000.^[7] Based on the reported earned premium for calendar year 2019 from the same group of insurers that reported the paid ALAE in column (1) and the indemnity claim counts in column (4) by accident year as of March 31, 2020.^[8] See Exhibit 8 of Section B.^[9] See Exhibit 5.2 of Section B.^[10] Based on the WCIRB's most recent evaluation of SB 1160 and AB 1244 reflecting a 60% reduction in lien filings, offset by 50% to reflect the impact of the reforms in the emerging ALAE data.

Projected Ultimate ALAE as a Percent of Ultimate Losses - Statewide
Based on Private Insurers Paid ALAE as Percentage of Premium
For Policies with Effective Dates between January 1, 2021 and August 31, 2021
Latest Year Development Factors

Accident Year	Paid ALAE as % of Premium at 3/31/20	Development Factors	Ultimate ALAE as % of Premium	Ultimate On-level Indemnity as % of Premium	Ultimate On-level Medical as % of Premium	Ultimate ALAE as % of Ultimate On-level Loss
	(1)	(2)	(3)	(4)	(5)	(6)
1991	9.7%	1.043	10.2%	41.9%	18.5%	16.8%
1992	7.6%	1.046	7.9%	36.4%	16.2%	15.1%
1993	5.4%	1.048	5.6%	36.3%	16.0%	10.7%
1994	5.8%	1.052	6.1%	43.0%	19.2%	9.7%
1995	8.5%	1.055	8.9%	57.4%	28.0%	10.5%
1996	9.8%	1.061	10.4%	60.2%	29.7%	11.5%
1997	11.8%	1.066	12.6%	61.1%	33.2%	13.4%
1998	13.4%	1.071	14.4%	61.2%	35.0%	15.0%
1999	14.7%	1.076	15.8%	59.6%	33.5%	16.9%
2000	13.3%	1.082	14.4%	48.1%	28.0%	19.0%
2001	11.8%	1.088	12.8%	39.9%	22.8%	20.4%
2002	10.1%	1.096	11.1%	30.5%	18.4%	22.7%
2003	6.9%	1.103	7.6%	20.1%	12.5%	23.4%
2004	4.8%	1.111	5.3%	16.5%	12.9%	18.1%
2005	4.4%	1.120	4.9%	19.1%	14.8%	14.5%
2006	5.4%	1.132	6.1%	24.3%	20.2%	13.8%
2007	7.5%	1.143	8.6%	32.4%	28.1%	14.2%
2008	9.6%	1.157	11.1%	38.6%	35.1%	15.0%
2009	11.8%	1.175	13.9%	44.3%	40.9%	16.3%
2010	11.6%	1.196	13.8%	42.1%	40.6%	16.7%
2011	10.4%	1.222	12.7%	38.9%	35.9%	17.0%
2012	9.3%	1.255	11.7%	34.4%	32.6%	17.4%
2013	7.7%	1.304	10.1%	28.9%	29.2%	17.4%
2014	7.2%	1.369	9.8%	25.3%	27.6%	18.6%
2015	6.1%	1.454	8.9%	24.2%	26.7%	17.4%
2016	5.3%	1.611	8.6%	22.6%	25.2%	17.9%
2017	4.5%	1.908	8.6%	22.5%	25.9%	17.7%
2018	3.4%	2.725	9.2%	23.5%	28.0%	17.9%
2019	1.4%	7.088	10.3%	26.2%	30.3%	18.2%

(7) Projected ALAE as a Percent of Ultimate On-level Losses

Prior to Impact of SB 1160 and AB 1244:

18.0%

(8) Impact of SB 1160 and AB 1244:

-4.8%

(9) Projected Ratio of ALAE to Losses after Impact of SB 1160 and AB 1244:

(7) x [1.0 + (8)]

17.2%

Notes:

- (1) Based on accident year paid ALAE and calendar year earned premium information from private insurers. Amounts shown do not reflect the paid cost of medical cost containment programs (MCCP).
- (2) Based on the private insurers latest year paid ALAE age-to-age development from Exhibit 11.1.
- (3) = (1) x (2).
- (4), (5) Based on Exhibits 7.1 and 7.3 of Section B. MCCP costs are not included in the medical ratios shown for accident years 2011 to 2019.
- (6) = (3) / [(4) + (5)].
- (7) Based on averaging 2018 and 2019.
- (8) Based on the WCIRB's most recent evaluation of SB 1160 and AB 1244 reflecting a 60% reduction in lien filings, offset by 50% to reflect the impact of the reforms in the emerging ALAE data.

Development of Paid Allocated Loss Adjustment Expenses as a Percent of Paid Indemnity^[1]

Accident Year	Age-to-Age Development (in months):														Paid	
	15-27	27-39	39-51	51-63	63-75	75-87	87-99	99-111	111-123	123-135	135-147	147-159	159-171	171-183	ALAE ^[2] 183-Ult	Indemnity ^[3] 183-Ult
1996														1.004		
1997													1.006	1.007		
1998												1.008	1.006	1.006		
1999											1.010	1.009	1.007	1.007		
2000										1.012	1.010	1.009	1.008	1.006		
2001									1.011	1.009	1.008	1.005	1.009	1.007		
2002								1.012	1.007	1.006	1.005	1.007	1.006	1.005		
2003							1.013	1.007	1.006	1.002	1.004	1.006	1.003	1.001		
2004						1.018	1.004	0.999	1.003	1.006	1.005	1.003	1.003	1.001		
2005					1.029	1.014	1.004	1.004	1.007	1.008	1.005	1.004	1.002	1.001		
2006				1.040	1.021	1.012	1.011	1.011	1.006	1.006	1.003	1.002	1.000			
2007			1.066	1.041	1.028	1.019	1.012	1.010	1.004	1.004	1.001	0.999				
2008		1.104	1.063	1.040	1.029	1.022	1.014	1.011	1.006	1.002	1.001					
2009	1.269	1.083	1.052	1.038	1.026	1.019	1.010	1.005	1.002	1.002						
2010	1.227	1.057	1.044	1.033	1.025	1.015	1.008	1.006	1.001							
2011	1.211	1.078	1.058	1.035	1.019	1.011	1.004	1.004								
2012	1.263	1.090	1.056	1.028	1.016	1.008	1.008									
2013	1.268	1.043	1.032	1.023	1.014	1.011										
2014	1.182	1.007	1.016	1.010	1.010											
2015	1.128	1.001	1.008	1.011												
2016	1.164	1.005	1.011													
2017	1.123	0.991														
2018	1.109															

Latest Year Development

Age to Age	1.109	0.991	1.011	1.011	1.010	1.011	1.008	1.004	1.001	1.002	1.001	0.999	1.000	1.001			1.044
Age-to-Ult.	1.250	1.127	1.138	1.125	1.112	1.102	1.089	1.081	1.076	1.076	1.074	1.072	1.073	1.074	1.120		1.044

3-Year Arithmetic Average Development

Age to Age	1.132	0.999	1.012	1.015	1.013	1.010	1.007	1.005	1.003	1.003	1.002	1.002	1.002	1.001			1.044
Age-to-Ult.	1.308	1.156	1.157	1.144	1.127	1.112	1.101	1.094	1.088	1.085	1.082	1.080	1.079	1.077	1.123		1.044

Notes:

^[1] Due to relatively sparse data and differing mixes of insurers represented in each factor, each factor shown is the ratio of the paid ALAE development factor to the paid indemnity development factor. The paid ALAE development is based on the private insurers' paid ALAE development from paid Exhibit 11.1, the paid indemnity development factors are from Exhibits 2.5.1 and 2.5.2 of Section B.

^[2] Based on the private insurers paid ALAE age-to-age development from Exhibit 11.1.

^[3] Based on Exhibit 3.1 of Section B.

Projected Ultimate ALAE as a Percent of Ultimate Losses - Statewide
For Policies with Effective Dates between January 1, 2021 and August 31, 2021
Using Paid ALAE as a Percent of Paid Indemnity for Private Insurers
Latest Year Development Factors

Accident Year	Paid ALAE as a Percent of Paid Indemnity at 3/31/20	Development Factors	Ultimate ALAE as a Percent of Ultimate Indemnity	Indemnity On-level Factors	Ultimate ALAE as a Percent of Ultimate On-level Indemnity
	(1)	(2)	(3)	(4)	(5)
2005	38.9%	1.073	41.8%	1.545	27.0%
2006	37.5%	1.074	40.2%	1.518	26.5%
2007	37.4%	1.073	40.1%	1.463	27.4%
2008	36.8%	1.072	39.5%	1.374	28.7%
2009	38.7%	1.074	41.6%	1.347	30.9%
2010	39.2%	1.076	42.1%	1.322	31.9%
2011	38.8%	1.076	41.8%	1.304	32.1%
2012	39.7%	1.081	42.9%	1.287	33.3%
2013	40.1%	1.089	43.7%	1.259	34.7%
2014	38.7%	1.102	42.6%	1.153	36.9%
2015	37.2%	1.112	41.4%	1.137	36.4%
2016	36.8%	1.125	41.5%	1.122	36.9%
2017	36.0%	1.138	41.0%	1.093	37.5%
2018	36.4%	1.127	41.0%	1.065	38.5%
2019	31.8%	1.250	39.8%	1.036	38.4%

	Projected:
(6) ALAE as Percent of On-level Indemnity:	38.5%
(7) Indicated Indemnity to Industry Average Filed Pure Premium Ratio:	0.278
(8) Indicated Medical to Industry Average Filed Pure Premium Ratio:	0.340
(9) ALAE as Percent of Total Losses Prior to Impact of SB 1160 and AB 1244:	17.3%
(10) Impact of SB 1160 and AB 1244:	-4.8%
(11) Projected Ratio of ALAE to Losses after Impact of SB 1160 and AB 1244: (9) x [1.0 + (10)]	16.5%

Notes:

- (1) Based on accident year paid ALAE information from private insurers. Amounts shown do not reflect the paid cost of medical cost containment programs (MCCP).
- (2) See Exhibit 14.1.
- (3) = (1) x (2).
- (4) From Exhibit 4.1 of Section B.
- (5) = (3) / (4).
- (6) Projected by averaging 2018 and 2019.
- (7), (8) From Exhibit 8 of Section B.
- (9) = (6) x (7) / [(7) + (8)].
- (10) Based on the WCIRB's most recent evaluation of SB 1160 and AB 1244 reflecting a 60% reduction in lien filings, offset by 50% to reflect the impact of the reforms in the emerging ALAE data.

Average Paid M CCP per Reported Indemnity Claim - Statewide
As of March 31, 2020

Accident Year	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>
2012	891	1,506	1,819	1,984	2,127	2,228	2,323
2013	841	1,363	1,659	1,861	1,990	2,090	2,145
2014	784	1,312	1,639	1,828	1,954	2,032	
2015	777	1,308	1,596	1,783	1,888		
2016	766	1,237	1,507	1,666			
2017	748	1,227	1,503				
2018	808	1,277					
2019	767						

Accident Year	<u>15</u>	<u>27</u>	<u>39</u>	<u>51</u>	<u>63</u>	<u>75</u>	<u>87</u>
2013	-5.7%	-9.5%	-8.8%	-6.2%	-6.5%	-6.2%	-7.7%
2014	-6.8%	-3.7%	-1.2%	-1.8%	-1.8%	-2.8%	
2015	-0.8%	-0.3%	-2.6%	-2.5%	-3.4%		
2016	-1.5%	-5.4%	-5.6%	-6.6%			
2017	-2.3%	-0.8%	-0.3%				
2018	8.0%	4.1%					
2019	-5.0%						

Annual Trend^[1]

All-Year	-1.7%	-2.7%	-3.6%	-3.8%	-3.7%	-4.5%	
R ²	0.499	0.716	0.914	0.950	0.937	0.951	

Note:

^[1] Trend is based on exponential distribution.

Source: WCIRB accident year experience calls.

Estimated Ultimate MCCP per Indemnity Claim - Statewide

Accident Year	Paid MCCP @3/31/20 (in \$000) (1)	Cumulative Development Factors ^[1] (2)	Estimated Ultimate MCCP (3)=(1)x(2)	Indemnity Claim Counts @3/31/20 (4)	Cumulative Count Development Factors ^[2] (5)	Estimated Ultimate Ind. Counts (6)=(4)x(5)	Estimated Ultimate MCCP per Indemnity Claim (7)=(3)/(6) x 1000	Annual change
2012	300,326	1.345	403,939	128,131	1.003	128,546	3,142	---
2013	291,857	1.373	400,635	136,242	1.004	136,754	2,930	-6.8%
2014	286,588	1.411	404,485	141,062	1.005	141,833	2,852	-2.7%
2015	273,650	1.470	402,196	144,972	1.007	145,971	2,755	-3.4%
2016	246,464	1.560	384,519	147,920	1.010	149,379	2,574	-6.6%
2017	221,909	1.734	384,844	147,678	1.015	149,895	2,567	-0.3%
2018	189,494	2.161	409,498	148,356	1.032	153,171	2,673	4.1%
2019	106,656	3.733	398,097	139,039	1.127	156,731	2,540	-5.0%

Estimated Annual Exponential Trend Based on:

2013 to 2019	-2.2%
2015 to 2019	-1.2%

Notes:

- [1] Based on MCCP development through 99 months from Exhibit 18.1. 99-to-ultimate development factors are based on selected paid medical development factors from Exhibit 3.2 of Section B.
- [2] Based on the latest year indemnity claim count age-to-age development from Exhibit 11.3.

Paid MCCP per Indemnity Claims Inventory^[1] by Calendar Year - Statewide

Calendar Year	Paid MCCP per Indemnity Claim Adjusted to Remove IMR/IBR Fees	Year-to-Year Change
2007	\$562	---
2008	\$848	50.8%
2009	\$808	-4.7%
2010	\$872	7.9%
2011	\$914	4.8%
2012	\$942	3.0%
2013	\$984	4.5%
2014	\$952	-3.3%
2015	\$1,027	7.9%
2016	\$1,028	0.1%
2017	\$939	-8.6%
2018	\$952	1.4%
2019	\$939	-1.4%

Estimated Annual Exponential Trend Based on:

2009-2019	1.3%
R ²	0.376

^[1] Indemnity claims inventory is the sum of indemnity claims open as of January 1 of Year N and newly-reported indemnity claims between January 1 of year N and December 31 of year N.

Source: WCIRB expense calls, aggregate indemnity and medical cost calls, and quarterly calls for experience.

Paid M CCP Development Factors - Statewide

Quarterly Development									
Age in Months	Accident Year								
	2012	2013	2014	2015	2016	2017	2018	2019	
3 - 6	5.599	5.796	6.047	5.652	6.118	5.561	5.890	5.288	
6 - 9	2.356	2.432	2.402	2.457	2.407	2.395	2.329	2.354	
9 - 12	1.763	1.773	1.771	1.742	1.725	1.776	1.824	1.775	
12 - 15	1.476	1.412	1.456	1.468	1.477	1.444	1.432	1.436	
15 - 18	1.277	1.253	1.299	1.282	1.244	1.258	1.239		
18 - 21	1.171	1.157	1.194	1.177	1.170	1.154	1.147		
21 - 24	1.128	1.121	1.128	1.120	1.125	1.122	1.116		
24 - 27	1.083	1.099	1.096	1.096	1.086	1.096	1.088		
27 - 30	1.077	1.081	1.073	1.073	1.077	1.071			
30 - 33	1.051	1.068	1.045	1.062	1.054	1.057			
33 - 36	1.045	1.054	1.036	1.047	1.053	1.051			
36 - 39	1.047	1.053	1.033	1.040	1.039	1.048			
39 - 42	1.036	1.043	1.026	1.040	1.032				
42 - 45	1.036	1.035	1.025	1.029	1.027				
45 - 48	1.031	1.027	1.019	1.028	1.026				
48 - 51	1.031	1.023	1.025	1.021	1.021				
51 - 54	1.025	1.023	1.025	1.020					
54 - 57	1.022	1.019	1.018	1.015					
57 - 60	1.017	1.016	1.016	1.014					
60 - 63	1.015	1.014	1.013	1.012					
63 - 66	1.016	1.017	1.013						
66 - 69	1.014	1.012	1.011						
69 - 72	1.011	1.011	1.009						
72 - 75	1.009	1.010	1.009						
75 - 78	1.010	1.009							
78 - 81	1.007	1.006							
81 - 84	1.008	1.006							
84 - 87	1.008	1.007							
Annual Development									
Age in Months	Accident Year								
	2012	2013	2014	2015	2016	2017	2018		
15 - 27	1.829	1.791	1.887	1.850	1.779	1.786	1.727		
27 - 39	1.242	1.284	1.272	1.240	1.241	1.246			
39 - 51	1.141	1.129	1.123	1.122	1.112				
51 - 63	1.077	1.072	1.072	1.062					
63 - 75	1.049	1.051	1.041						
75 - 87	1.034	1.028							
87 - 99	1.021								
	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	<u>75-87</u>	<u>87-99</u>	<u>99-Ult.</u>	
Age-to-Age ^[1]	1.727	1.246	1.112	1.062	1.041	1.028	1.021		
Age -to-Ult. ^[2]	3.733	2.161	1.734	1.560	1.470	1.411	1.373	1.345	

Notes:

[1] Based on Latest Year.

[2] 99-to-Ult. is based on selected paid medical 99-to-ultimate development factor on Exhibit 3.2 of Section B.

Source: WCIRB quarterly calls for experience.

Projected Ratio of M CCP to Losses - StatewideBased on Estimated Accident Year Indemnity Claim Frequency and M CCP Severity
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

Accident Year	Paid M CCP @3/31/20 (in \$000) (1)	Cumulative Development Factors ^[1] (2)	Estimated Ultimate M CCP (3)=(1)x(2)	Indemnity Claim Counts @3/31/20 (4)	Cumulative Count Development Factors ^[2] (5)	Estimated Ultimate Ind. Counts (6)=(4)x(5)	Estimated Ultimate M CCP per Indemnity Claim (7)=(3)/(6) x 1000
2012	300,326	1.345	403,939	128,131	1.003	128,546	3,142
2013	291,857	1.373	400,635	136,242	1.004	136,754	2,930
2014	286,588	1.411	404,485	141,062	1.005	141,833	2,852
2015	273,650	1.470	402,196	144,972	1.007	145,971	2,755
2016	246,464	1.560	384,519	147,920	1.010	149,379	2,574
2017	221,909	1.734	384,844	147,678	1.015	149,895	2,567
2018	189,494	2.161	409,498	148,356	1.032	153,171	2,673
2019	106,656	3.733	398,097	139,039	1.127	156,731	2,540

Projected Based on 2-Year Average of 2018 and 2019:

	Ultimate M CCP ^[5]	Ult. Ind. Counts ^[3]	Ult. M CCP per Ind. Counts ^[4]
2020	378,106	145,050	2,607
2021	379,996	145,775	2,607
11/1/2021	379,996	145,775	2,607

(a) Projected M CCP (\$000):	379,996
(b) Calendar Year 2019 Earned Premium ^[6] (\$000):	16,100,338
(c) Projected Loss to Industry Average Filed Pure Premium Ratio ^[7] :	0.618
(d) Premium Adjustment Factor for Calendar Year 2019 ^[8] :	0.909
(e) Projected Losses (\$000): (b) x (c) x (d)	9,044,558
(f) Projected Ratio of M CCP to Losses: (a)/(e)	4.2%

Notes:

^[1] Based on M CCP development through 99 months from Exhibit 18.1. 99-to-ultimate development factors is based on selected paid medical development factors from Exhibit 3.2 of Section B.^[2] Based on the latest year indemnity claim count age-to-age development from Exhibit 11.3.^[3] Estimated based on projected frequency trends for accident years 2019 to 2022. The estimated frequency changes are based on the projected growth in intra-class indemnity claim frequency (see Section B, Exhibit 6.1). These frequency trends were then applied to the ultimate indemnity claim counts estimated from averaging 2018 and 2019.^[4] Severity is projected by applying an annual growth rate of 0% to the ultimate M CCP severity estimated from averaging 2018 and 2019.^[5] Column(6) x Column(7) / 1,000.^[6] Based on the reported earned premium for calendar year 2019 from the same group of insurers that reported the paid M CCP in column (1) and the indemnity claim counts in column (4) by accident year as of March 31, 2020.^[7] See Exhibit 8 of Section B.^[8] See Exhibit 5.2 of Section B.

Projected Ratio of M CCP to Losses - Statewide

Based on Estimated Accident Year Indemnity Claim Frequency and M CCP Severity - Trend from Latest Year
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

Accident Year	Paid M CCP @3/31/20 (in \$000) (1)	Cumulative Development Factors ^[1] (2)	Estimated Ultimate M CCP (3)=(1)x(2) (3)	Indemnity Claim Counts @3/31/20 (4)	Cumulative Count Development Factors ^[2] (5)	Estimated Ultimate Ind. Counts (6)=(4)x(5) (6)	Estimated Ultimate M CCP per Indemnity Claim (7)=(3)/(6) x 1000 (7)
2012	300,326	1.345	403,939	128,131	1.003	128,546	3,142
2013	291,857	1.373	400,635	136,242	1.004	136,754	2,930
2014	286,588	1.411	404,485	141,062	1.005	141,833	2,852
2015	273,650	1.470	402,196	144,972	1.007	145,971	2,755
2016	246,464	1.560	384,519	147,920	1.010	149,379	2,574
2017	221,909	1.734	384,844	147,678	1.015	149,895	2,567
2018	189,494	2.161	409,498	148,356	1.032	153,171	2,673
2019	106,656	3.733	398,097	139,039	1.127	156,731	2,540

Projected Based on Latest Year:

	Ultimate M CCP ^[5]	Ult. Ind. Counts ^[3]	Ult. M CCP per Ind. Counts ^[4]
2020	371,026	146,073	2,540
2021	372,881	146,803	2,540
11/1/2021	372,881	146,803	2,540

(a) Projected M CCP (\$000):	372,881
(b) Calendar Year 2019 Earned Premium ^[6] (\$000):	16,100,338
(c) Projected Loss to Industry Average Filed Pure Premium Ratio ^[7] :	0.618
(d) Premium Adjustment Factor for Calendar Year 2019 ^[8] :	0.909
(e) Projected Losses (\$000): (b) x (c) x (d)	9,044,558
(f) Projected Ratio of M CCP to Losses: (a)/(e)	4.1%

Notes:

- ^[1] Based on M CCP development through 99 months from Exhibit 18.1. 99-to-ultimate development factor is based on selected paid medical development factors from Exhibit 3.2 of Section B.
- ^[2] Based on the latest year indemnity claim count age-to-age development from Exhibit 11.3.
- ^[3] Estimated based on projected frequency trends for accident years 2020 to 2022. The estimated frequency changes are based on the projected growth in intra-class indemnity claim frequency (see Section B, Exhibit 6.1). These frequency trends were then applied to the 2019 ultimate indemnity claim counts.
- ^[4] Severity is projected by applying an annual growth rate of 0% to the 2019 ultimate M CCP severity.
- ^[5] Column(6) x Column(7) / 1,000.
- ^[6] Based on the reported earned premium for calendar year 2019 from the same group of insurers that reported the paid M CCP in column (1) and the indemnity claim counts in column (4) by accident year as of March 31, 2020.
- ^[7] See Exhibit 8 of Section B.
- ^[8] See Exhibit 5.2 of Section B.

Projected Ratio of MCCP to Losses - Statewide

Based on Estimated Accident Year Indemnity Claim Frequency and MCCP Severity with Trend
Based on AY Ultimate MCCP per Indemnity Claim and Applied to the Latest Two Years
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

Accident Year	Paid MCCP @3/31/20 (in \$000) (1)	Cumulative Development Factors ^[1] (2)	Estimated Ultimate MCCP (3)=(1)x(2)	Indemnity Claim Counts @3/31/20 (4)	Cumulative Count Development Factors ^[2] (5)	Estimated Ultimate Ind. Counts (6)=(4)x(5)	Estimated Ultimate MCCP per Indemnity Claim (7)=(3)/(6) x 1000
2012	300,326	1.345	403,939	128,131	1.003	128,546	3,142
2013	291,857	1.373	400,635	136,242	1.004	136,754	2,930
2014	286,588	1.411	404,485	141,062	1.005	141,833	2,852
2015	273,650	1.470	402,196	144,972	1.007	145,971	2,755
2016	246,464	1.560	384,519	147,920	1.010	149,379	2,574
2017	221,909	1.734	384,844	147,678	1.015	149,895	2,567
2018	189,494	2.161	409,498	148,356	1.032	153,171	2,673
2019	106,656	3.733	398,097	139,039	1.127	156,731	2,540

Projected Based on 2-Year Average of 2018 and 2019:

	Ultimate MCCP ^[5]	Ult. Ind. Counts ^[3]	Ult. MCCP per Ind. Counts ^[4]
2020	371,270	145,050	2,560
2021	368,648	145,775	2,529
11/1/2021	367,183	145,775	2,519

(a) Projected MCCP (\$000):	367,183
(b) Calendar Year 2019 Earned Premium ^[6] (\$000):	16,100,338
(c) Projected Loss to Industry Average Filed Pure Premium Ratio ^[7] :	0.618
(d) Premium Adjustment Factor for Calendar Year 2019 ^[8] :	0.909
(e) Projected Losses (\$000): (b) x (c) x (d)	9,044,558
(f) Projected Ratio of MCCP to Losses: (a)/(e)	4.1%

Notes:

^[1] Based on MCCP development through 99 months from Exhibit 18.1. 99-to-ultimate development factor is based on selected paid medical development factors from Exhibit 3.2 of Section B.

^[2] Based on the latest year indemnity claim count age-to-age development from Exhibit 11.3.

^[3] Estimated based on projected frequency trends for accident years 2019 to 2022. The estimated frequency changes are based on the projected growth in intra-class indemnity claim frequency (see Section B, Exhibit 6.1). These frequency trends were then applied to the ultimate indemnity claim counts estimated from averaging 2018 and 2019.

^[4] Severity is projected by applying an annual growth rate of -1.2% to the ultimate MCCP severity estimated from averaging 2018 and 2019.

^[5] Column(6) x Column(7) / 1,000.

^[6] Based on the reported earned premium for calendar year 2019 from the same group of insurers that reported the paid MCCP in column (1) and the indemnity claim counts in column (4) by accident year as of March 31, 2020.

^[7] See Exhibit 8 of Section B.

^[8] See Exhibit 5.2 of Section B.

Projected Ratio of M CCP to Losses - Statewide

Based on Estimated Accident Year Indemnity Claim Frequency and M CCP Severity with Trend
Based on CY Paid M CCP per Open Indemnity Claim and Applied to the Latest Two Years
for Policies with Effective Dates between January 1, 2021 and August 31, 2021

Accident Year	Paid M CCP @3/31/20 (in \$000) (1)	Cumulative Development Factors ^[1] (2)	Estimated Ultimate M CCP (3)=(1)x(2) (3)	Indemnity Claim Counts @3/31/20 (4)	Cumulative Count Development Factors ^[2] (5)	Estimated Ultimate Ind. Counts (6)=(4)x(5) (6)	Estimated Ultimate M CCP per Indemnity Claim (7)=(3)/(6) x 1000 (7)
2012	300,326	1.345	403,939	128,131	1.003	128,546	3,142
2013	291,857	1.373	400,635	136,242	1.004	136,754	2,930
2014	286,588	1.411	404,485	141,062	1.005	141,833	2,852
2015	273,650	1.470	402,196	144,972	1.007	145,971	2,755
2016	246,464	1.560	384,519	147,920	1.010	149,379	2,574
2017	221,909	1.734	384,844	147,678	1.015	149,895	2,567
2018	189,494	2.161	409,498	148,356	1.032	153,171	2,673
2019	106,656	3.733	398,097	139,039	1.127	156,731	2,540

Projected Based on 2-Year Average of 2018 and 2019:

	Ultimate M CCP ^[5]	Ult. Ind. Counts ^[3]	Ult. M CCP per Ind. Counts ^[4]
2020	385,574	145,050	2,658
2021	392,540	145,775	2,693
11/1/2021	394,216	145,775	2,704

(a) Projected M CCP (\$000):	394,216
(b) Calendar Year 2019 Earned Premium ^[6] (\$000):	16,100,338
(c) Projected Loss to Industry Average Filed Pure Premium Ratio ^[7] :	0.618
(d) Premium Adjustment Factor for Calendar Year 2019 ^[8] :	0.909
(e) Projected Losses (\$000): (b) x (c) x (d)	9,044,558
(f) Projected Ratio of M CCP to Losses: (a)/(e)	4.4%

Notes:

^[1] Based on M CCP development through 99 months from Exhibit 18.1. 99-to-ultimate development factor is based on selected paid medical development factors from Exhibit 3.2 of Section B.

^[2] Based on the latest year indemnity claim count age-to-age development from Exhibit 11.3.

^[3] Estimated based on projected frequency trends for accident years 2019 to 2022. The estimated frequency changes are based on the projected growth in intra-class indemnity claim frequency (see Section B, Exhibit 6.1). These frequency trends were then applied to the ultimate indemnity claim counts estimated from averaging 2018 and 2019.

^[4] Severity is projected by applying an annual growth rate of 1.3% to the ultimate M CCP severity estimated from averaging 2018 and 2019.

^[5] Column(6) x Column(7) / 1,000.

^[6] Based on the reported earned premium for calendar year 2019 from the same group of insurers that reported the paid M CCP in column (1) and the indemnity claim counts in column (4) by accident year as of March 31, 2020.

^[7] See Exhibit 8 of Section B.

^[8] See Exhibit 5.2 of Section B.

Section B
Appendix D
COVID-19 Claim Cost Projection

The COVID-19 pandemic began to emerge in California in early 2020. During the initial period of the pandemic, without the presence of a legal presumption of compensability of COVID-19-related illnesses in the workers' compensation system, many claims were filed, particularly by first responders and healthcare workers.

On May 6, 2020, Governor Newsom issued Executive Order N-62-20 (Executive Order) thereby providing a rebuttable presumption of compensability for all workers directed by their employer to work outside their home. In May 2020, the WCIRB estimated that the statewide cost of claims projected to be filed during the effective period of the rebuttable presumption in the Executive Order was \$1.2 billion.¹ While the term of the Executive Order has now expired, workers' compensation claims continue to be filed, with several bills under consideration by the Legislature to re-establish a legal presumption of compensability for COVID-19 claims of specified workers. As of mid-July, data from the Division of Workers' Compensation (DWC) indicates that almost 23,000 workers' compensation claims involving COVID-19 have been filed in California, with the numbers increasing rapidly.

Infectious disease experts and epidemiologists expect the COVID-19 pandemic to continue into 2021 and beyond. As the pandemic began to emerge in California early in 2020, the current advisory workers' compensation pure premium rates, approved by the Commissioner in November 2019 to be effective January 1, 2020, do not reflect a provision for COVID-19 claim costs emerging in 2020. With the pandemic expected to continue into 2021 and beyond, the WCIRB has estimated the cost of COVID-19 claims projected to be incurred on policies incepting between January 1, 2021 and August 31, 2021, and has reflected this cost estimate in the pure premium rates proposed in this filing.

The WCIRB estimates the cost of COVID-19 claims on January 1, 2021 to August 31, 2021 policies to be 3.8% of total losses and loss adjustment expenses (LAE). This equates to an average of \$0.06 per \$100 of payroll. The methodology underlying this projection is summarized below.

Projection Methodology

Limited forecasts are available for COVID-19 infection rates in 2020 and projections for 2021 and 2022 are even more limited. To project COVID-19 claims arising on January 1, 2021 to August 31, 2021 policies, the WCIRB first estimated the total cost of losses and LAE for COVID-19 claims arising in 2020 based on available information about COVID-19 deaths and hospitalizations in California as well as from several publicly available disease and statistical models.² The WCIRB then projected COVID-19 claim costs for 2021 and 2022 based on judgmental assumptions relating COVID-19 deaths and hospitalizations in 2021 and 2022 to those in 2020. These assumptions were informed by a comprehensive review of published COVID-19 related statistics and research.

Exhibits 1.1 through 1.3 summarize the WCIRB's projection of the estimated cost of COVID-19 losses and LAE incurred on January 1, 2021 to August 31, 2021 policies. Exhibit 1.1 summarizes the computation of the projected accident year 2020 COVID-19 losses and LAE used as a basis to project COVID-19 losses and LAE in 2021 and 2022.

¹ *Evaluation of Cost Impact of Governor Newsom's Executive Order on Rebuttable Presumption for California COVID-19 Workers' Compensation Claims*, WCIRB, May 2020.

² For purposes of this valuation, the WCIRB assumed that a presumption reasonably similar to that included in Executive Order N-62-20 will be in effect for the remainder of year. If by the time of the CDI public hearing on this filing no presumption is enacted or a significantly different presumption is enacted, the WCIRB will reassess this evaluation and, if appropriate, amend the proposed January 1, 2021 advisory pure premium rates.

Line (1) of Exhibit 1.1 shows the projected number of California COVID-19 deaths for the working age population (18-69 years) to occur in 2020. The projection was based on published forecasts as of August 3, 2020 from the Institute for Health Metrics and Evaluation (IHME) and YouYang GU from MIT (MIT-YYG).³ At the time of this valuation, both sources projected the statewide COVID-19 deaths through November 1, 2020. The WCIRB then extended the average of the two models of projected deaths to the end of 2020 assuming the incremental monthly change in deaths in October persists in November and December 2020, given that a potential winter wave of COVID-19 infections may occur concurrently with the flu season that typically starts around October. Table 1 shows the actual and projected COVID-19 death counts by month for 2020 using this approach.

Table 1 – Projected COVID-19 Deaths by Month for 2020

	Actuals from CDPH		Average of IHME and MIT-YYG Projections (as of 8/3/2020)			Estimated Based on October Change	
	June	July	August	September	October	November	December
Cumulative Total	6,090	9,356	12,531	15,158	17,602	20,046	22,490
Incremental Monthly Change	—	3,266	3,175	2,627	2,444	2,444	2,444

The majority of COVID-19 deaths have occurred in older people, many of whom are not working. The WCIRB's year-end projection for 2020 COVID-19 deaths of approximately 22,500 was adjusted to the California working age population based on the age distribution of deaths as of August 2, 2020, published by the California Department of Public Health (CDPH).⁴ The projected 2020 death counts for the working age population of approximately 7,800 based on this approach and shown on line (1) of Exhibit 1.1 were validated for reasonableness against the reported-to-date death counts shown in Table 2.

Table 2 – Projected COVID-19 Deaths and Hospitalizations for Working Age Population (18 to 69 Years) Compared to Reported-to-Date

	Reported-to-Date (End of July) ⁵	Projected 2020 Year-End	% Change between July 2020 and Year-End
Total Deaths	3,230	7,790	+141%
Total Hospitalizations (including deaths) ⁶	19,017	48,953	+157%
Death Rate per 100,000	12	29	+141%
Hospitalization rate per 100,000 (including deaths)	71	183	+157%
Hospital Mortality Rate	17%	16%	-6%

Line (2) of Exhibit 1.1 shows the projected number of California COVID-19 hospitalizations (excluding deaths) for the working age population (18-69 years) to occur in 2020. At the time of this valuation, limited reliable forecasts of total COVID-19 hospitalizations in 2020 were available, partly because cumulative hospitalizations at the state level are not always reported. In particular, these forecasts are challenging for California given that the state has not, at the time of this valuation, yet progressed past its "first infection wave" unlike several other states.⁷

³ [IHME's projection for COVID-19 deaths in California](#) used in this valuation was made on August 3, 2020. Similarly, [YouYang Gu's](#) deaths projection used was made on August 3, 2020.

⁴ California Department of Public Health COVID-19 Cases by Age Group: <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/COVID-19-Cases-by-Age-Group.aspx> (accessed on August 3, 2020).

⁵ The reported-to-date COVID-19 deaths were as of August 2, 2020, published by the CDPH. The reported-to-date COVID-19 hospitalizations were as of July 25, 2020, published by the CDC (COVID-NET) on July 31, 2020. The CDC updates prior weekly hospitalizations when adding the latest weekly hospitalizations.

⁶ All reported deaths for working age individuals are assumed to follow hospitalization.

⁷ States that passed their first wave of infections include New York, New Jersey, Maryland, Massachusetts and Connecticut. <https://91-divoc.com/pages/covid-visualization/>

The WCIRB projected statewide California 2020 COVID-19 hospitalizations based on an assumed total hospitalization rate (including deaths) after the “first infection wave” by using data from five other states that essentially completed a first infection wave. For many of these states, the rate of COVID-19 infections was higher, compared to California, as they were considered to be “hotspots” in the U.S. during the early months of the pandemic. The Massachusetts total post-first infection wave hospitalization rate of 172 per 100,000 population as of July 28 (the lowest total hospitalization rate among these five states)⁸ was selected by the WCIRB to project year-end hospitalizations in California. The year-end projection for COVID-19 hospitalizations (including deaths) was then adjusted to the California working age population based on the age distribution of COVID-19 hospitalizations published by the CDC (COVID-NET) as of July 25, 2020.⁹ The WCIRB projected total 2020 COVID-19 hospitalizations (including deaths) in California of approximately 49,000 was also validated for reasonableness against the reported-to-date hospitalizations as shown in Table 2.

The projected total hospitalizations were further categorized as severe cases (those that do not require an ICU stay) and critical cases (ICU cases). Critical cases were assumed to be 30% of all hospitalizations, consistent with the assumption reflected in the WCIRB’s May evaluation of the Executive Order.¹⁰ The projected deaths were excluded from both severe and critical cases by assuming an approximate mortality rate of 45% among critical cases and subtracting the remaining deaths from severe cases.¹¹ The projected 2020 number of working age hospitalizations excluding deaths computed in this manner is 41,200, as shown on line (2) of Exhibit 1.1.¹²

Lines (1) and (2) of Exhibit 1.1 estimate the total 2020 COVID-19 deaths and hospitalizations of working age Californians. To estimate the number of worker’s compensation claims that will potentially be filed for accident year 2020, the WCIRB compared the number of claims filed with the DWC through First Report of Injury as of July 23, 2020 with reported working age COVID-19 infections from the CDPH (which include deaths, hospitalizations and mild cases) during the same time period. The WCIRB also assumed approximately 50% of the working age mild cases of COVID-19 will not file a claim¹³ and about 10% of all COVID-19 claims filed with the DWC will be denied with the denial ultimately upheld. The reasonability of both of these assumptions was validated based on information about COVID-19 claims filed thus far and based on feedback from claims experts. Based on these assumptions, a conversion factor of 12%, as computed in Exhibit 2 and shown on line (3) of Exhibit 1.1, was used to adjust total 2020 working age COVID-19 deaths and hospitalizations to projected workers’ compensation claims.

Line (4) of Exhibit 1.1 shows the projected number of 2020 COVID-19 death claims in the California workers’ compensation system. It is computed as the product of the projected number of COVID-19 working age deaths on line (1) and the workers’ compensation claim conversion factor of 12% shown on line (3). Line (5) of Exhibit 1.1 shows the projected loss and LAE cost of 2020 COVID-19 death claims, which is the product of line (4) and the average cost of losses and LAE on death claims as projected in the WCIRB’s May 2020 evaluation of the Executive Order.¹⁴ Lines (6) and (7) of Exhibit 1.1 show a similar computation for 2020 COVID-19 hospitalization workers’ compensation claims excluding deaths.¹⁵ In the May 2020 evaluation of the Executive Order, the WCIRB estimated the average cost of mild, severe, critical and death COVID-19 claims in California based on a review of WCIRB data and published data as

⁸ [COVID Tracking Project](#).

⁹ [CDC COVID-NET Laboratory-confirmed COVID-19-Associated Hospitalizations by Age Group \(accessed on July 31, 2020\)](#).

¹⁰ Based on the [proportion of ICU cases reported in California](#), accessed on August 14, 2020.

¹¹ Armstrong R.A., Kane, A.D., and Cook, T.M. [Outcomes from intensive care in patients with COVID-19: a systematic review and meta-analysis of observational studies](#). Anaesthesia. June 30, 2020.

¹² The estimated distribution between severe and critical cases of COVID-19 after excluding deaths was also used in the computation of line (7) of Exhibit 1.1, the projected cost of 2020 COVID-19 hospitalization claims in the California workers’ compensation system.

¹³ This assumption was also reflected in the WCIRB’s evaluation of the Executive Order.

¹⁴ *Evaluation of Cost Impact of Governor Newsom’s Executive Order on Rebuttable Presumption for California COVID-19 Workers’ Compensation Claims*, WCIRB, May 2020. In the evaluation, the WCIRB projected an average loss and LAE cost of COVID-19 death claims of \$381,800.

¹⁵ In the May 2020 evaluation of the Executive Order, the WCIRB projected an average loss and LAE cost of COVID-19 severe hospitalization claims of \$101,800 and an average cost of critical hospitalization claims of \$260,100.

well as feedback from a number of workers' compensation claims and medical experts. The WCIRB continues to believe those estimates are reasonable.

Line (8) of Exhibit 1.1 shows the estimated statewide accident year 2020 cost of losses and LAE on COVID-19 claims. The total cost on line (8) is computed as the sum of the projected cost of death claims shown on line (5), the cost of hospitalization claims (excluding death claims) shown on line (7) and the estimated cost of "mild" (non-hospital) claims, with the cost of mild claims computed based on the methodology used in the WCIRB's May 2020 evaluation of the Executive Order.¹⁶ Line (9) of Exhibit 1.1 shows that 63% of statewide COVID-19 claim costs are estimated to be generated from the insured market. This estimate is based on the percentage of all COVID-19 claims reported to the DWC as of July 23, 2020 that arose in the insured market. Finally, line (10) of Exhibit 1.1 shows the \$0.7 billion estimated cost of losses and LAE on accident year 2020 COVID-19 claims in the insured market.

Exhibit 1.2 summarizes the computation of the projected accident year 2021 COVID-19 losses and LAE. There is very limited information available on COVID-19 infections to occur in 2021. A number of published expert forecasts indicate that COVID-19 infections in 2021 will not be significantly better or worse than in 2020, and the number of hospitalizations in 2021 is likely to be similar to that in 2020.¹⁷ All available forecasts indicated that more infection waves will occur in 2020 and 2021 and likely continue until the middle of 2022 when herd immunity may be reached. Based on this information, the WCIRB estimates the level of COVID-19 claims in 2021 (prior to reflecting the impact of improved treatments or a potential vaccine) to be generally comparable to that in 2020 (i.e., a relativity of 2021 to 2020 of 1.0) as shown on line (11) of Exhibit 1.2.

There is potential for the pandemic to improve significantly in 2021 due to ongoing improvements in medical treatments for COVID-19 patients or the impact of potential vaccines or treatments likely to be proven effective in 2021. Exhibit 3 summarizes the current significant advances in treatment of COVID-19 illnesses. As shown on line (12) of Exhibit 1.2, the WCIRB judgmentally estimates a 25% reduction in COVID-19 cost levels in 2021 due to improved treatments and the potential impact of a vaccine.

Line (13) of Exhibit 1.2 shows the projected accident year 2021 COVID-19 losses and LAE for the insured market. The projection of \$0.52 billion is based on the 2020 estimate of COVID-19 losses and LAE with a judgmental estimated reduction of 25% to reflect the potential impact of improved treatments and a vaccine. This equates to 4.7% of the total non-COVID-19 accident year 2021 loss and LAE projection of \$10.9 billion, determined using the methodologies summarized in Section B, as shown on lines (14) and (15) of Exhibit 1.2.

Exhibit 1.3 summarizes the computation of the COVID-19 losses and LAE projected for accident year 2022 and the January 1, 2021 to August 31, 2021 policy period. As shown on line (16), the WCIRB judgmentally estimates a 67% reduction in accident year 2022 COVID-19 cost levels relative to 2020 due to continued improvements in treatments and the potential for a reduced number and severity of waves caused by continued impact of COVID-19 vaccines and potential herd immunity to COVID-19. Similar to the computation of the projected accident year 2021 COVID-19 losses and LAE, line (17) of Exhibit 1.3 shows the projected accident year 2022 COVID-19 losses and LAE for the insured market of \$0.23 billion. This equates to 1.9% of the total non-COVID-19 accident year 2022 loss and LAE projection of \$12.0 billion, determined using the methodologies summarized in Section B, as shown on lines (18) and (19) of Exhibit 1.3.

Line (20) of Exhibit 1.3 computes the adjustment factor for the estimated cost impact of COVID-19 claims to be incurred on policies incepting between January 1, 2021 and August 31, 2021. As shown, the

¹⁶ In the May 2020 evaluation of the Executive Order, the WCIRB projected an average loss and LAE cost of COVID-19 mild claims of \$2,900. Mild claims are projected to represent only about 6% of total COVID-19 claim costs.

¹⁷ Based on several studies reviewed: Kronick, Richard, ["How COVID-19 Will Likely Affect Spending, And Why Many Other Analyses May Be Wrong."](#) *Health Affairs Blog*, May 19, 2020; Kissler S.M., Tedijanto, C., Goldstein, E., Grad, Y.H., Lipsitch, M., ["Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period"](#), *Science*, May 22, 2020, 368(6493):860-868; Moore, K.A., Lipsitch, M., Barry, J.M., Osterholm, M.T., ["COVID-19: The CIDRAP Viewpoint - Part 1: The Future of the COVID-19 Pandemic: Lessons Learned from Pandemic Influenza"](#), April 30, 2020.

average of the 2021 and 2022 projections, weighted based on the relative exposure of each year for the January 1, 2021 through August 31, 2021 policy period, is 3.8% of total non-COVID-19 projected losses and LAE. This equates to an average of \$0.06 per \$100 of payroll based on a projected average pure premium rate prior to the impact of COVID-19 claims of \$1.50 per \$100 of payroll. The process to reflect the average provision of \$0.06 per \$100 of payroll based on the relative frequency of COVID-19 claims by industry sector is detailed in Section A, Appendix A.

Limited information on projected COVID-19 infection rates in 2021 and 2022 is available. The WCIRB projected COVID-19 claim costs for 2021 and 2022 based on a series of reasonable assumptions informed by a comprehensive review of a wide range of available COVID-19 related statistics and research. Given the inherent uncertainty in the COVID-19 projection as well as the extreme fluidity of the pandemic, the WCIRB plans to reassess its evaluation of COVID-19 claim costs to be incurred on January 1, 2021 through August 31, 2021 policies in September based on updated information and statistical models as well as any legislation impacting compensability of COVID-19 enacted by the California Legislature by the close of the legislative session. If appropriate based on that re-evaluation, the WCIRB will amend the January 1, 2021 advisory pure premium rates proposed in this filing by the time of the California Department of Insurance public hearing on the filing.

Projections Based on Alternative Assumptions

Given the uncertainty involved as to the future of the pandemic as well as the breadth of the assumptions reflected in the WCIRB's projection summarized above, the WCIRB has also projected a low-range and a high-range COVID-19 cost estimate for the January 1, 2021 to August 31, 2021 policy period.

The WCIRB's low-range projection reflects the same assumptions used in the projection summarized in Exhibits 1.1 to 1.3 with several exceptions. First, the number of death claims projected was based solely on the IHME model estimate, which was the lower of the two model projections. Second, the number of COVID-19 working age hospitalizations for the remainder of 2020 was limited to be only 133% of the number of working age hospitalizations that have occurred thus far in 2020 (in lieu of almost 160% as shown in Table 2). Finally, reflecting more optimistic assumptions regarding future waves, improved treatments and the impact of vaccines, the WCIRB assumed that 2021 COVID-19 costs would be 50% of the 2020 costs (in lieu of 75%) and that 2022 COVID-19 costs would be 25% of the 2020 costs (in lieu of 33%). The WCIRB's low-range estimate computed on this basis is 2.4% of total non-COVID-19 projected losses and LAE for the January 1, 2021 to August 31, 2021 policy period. This equates to an average of \$0.04 per \$100 of payroll.

The WCIRB's high-range projection reflects the same assumptions used in the projection summarized in Exhibits 1.1 to 1.3 with several alternative assumptions. First, the number of death claims projected was based solely on the MIT-YYG model estimate, which was the higher of the two model projections. Second, the number of projected COVID-19 hospitalizations for 2020 was based on the average of the Massachusetts and Maryland hospitalization rates after their first infection wave, which is about 10% higher than the estimate based solely on the Massachusetts information. Finally, reflecting less optimistic assumptions regarding future waves, improved treatments and the impact of vaccines, the WCIRB assumed in the high-range projection that 2021 COVID-19 costs would be 90% of the 2020 costs (in lieu of 75%) and that 2022 COVID-19 costs would be 50% of the 2020 costs (in lieu of 33%). The WCIRB's high-range estimate computed on this basis is 5.2% of total non-COVID-19 projected losses and LAE for the January 1, 2021 to August 31, 2021 policy period. This equates to an average of \$0.08 per \$100 of payroll.

Projected Accident Year 2020 COVID-19 Claim Costs

(1) AY 2020 Statewide Deaths Working Age Population: (Tables 1 and 2)	7,800
(2) AY 2020 Statewide Hospitalizations (Excl. Deaths) Working Age Population: (Table 2)	41,200
(3) Workers' Compensation Claim Conversion Factor: (Exhibit 2)	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 (Excl. Death) 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: (DWC summary of COVID-19 claims)	63%
(10) Projected AY 2020 Insured Market COVID-19 Loss & LAE: (8) x (9)	\$0.7B

* Based on severity estimates by COVID-19 claim type in the WCIRB's May 2020 evaluation of the Governor's Executive Order.

** Based on proportion of "mild" COVID-19 claims costs in the WCIRB's May 2020 evaluation of the Governor's Executive Order.

Projected Accident Year 2021 COVID-19 Claim Costs

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: {Exhibit 1.1 (10)} x (11) x {1.0 - (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%

* Based on the loss and loss adjustment projection methodologies discussed in Section B.

Projected 1/1/2021 to 8/31/2021 Policy Period COVID-19 Claim Costs

16) Estimated Relativity AY 2022 to AY 2020 COVID-19 Claims: (Includes Judgmental Adjustment for Improved Treatment & Potential Vaccine)	0.33
17) AY 2022 Insured Market COVID-19 Loss & LAE: {Exhibit 1.1 (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 to 8/31/2021 Policy Period COVID-19 Adjustment Factor {[Exhibit 1.2 (15)] x 67%} + {(19) x 33%}	3.8%

* Based on the loss and loss adjustment projection methodologies discussed in Section B.

Computation of COVID-19 Workers' Compensation Claim Conversion Factor

1)	Total COVID-19 Infections Age 18-69 as of July 2020: ¹	312,000
2)	Total COVID-19 Hospitalizations (Including Deaths) Age 18-69 as of July 2020: ²	19,000
3)	Total COVID-19 Mild Cases Age 18-69: (1) - (2)	293,000
4)	COVID-19 Infections Excluding 50% of Mild Cases Age 18-69: (2) + (3) x 50%	165,500
5)	Total COVID-19 Workers' Compensation Claims Filed as of July 2020: ³	22,300
6)	Estimated Proportion of Claims Denied and Upheld:	10%
7)	Workers' Compensation Claim Conversion Factor: (5) / (4) x {1.0 - (6)}	12%

¹ COVID Tracking Project as of July 18, 2020 (adjusted to working age population).
² CDC (COVID-NET) as of July 25, 2020. COVID-19 hospitalizations often lag a week behind COVID-19 infections.
³ Based on Division of Workers' Compensation First Report of Injury claims as of July 23, 2020.

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-19 infections)
 - Prelim report showed mortality reduced by 12% among ICU patients
 - Remdesivir (FDA approved for emergency use for hospitalized patients)
 - Shown to reduce time to recovery by 4 days (11 vs. 15 days)
 - Convalescent plasma (FDA approved for emergency use)
 - Prone positioning reduces need for ventilators by 46%
- Treatments under clinical trial investigation (about 1,900 ongoing trials as of August 2020)
 - Inhaled beta interferon: a U.K. trial showed an 80% mortality reduction among 100 hospitalized patients
 - Plasma-based therapies
- Potential vaccines
 - An effective vaccine by early 2021 highly likely
 - > 140 potential COVID-19 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