

Actuarial Committee

Meeting Minutes

Date	Time	Location	Staff Contact
March 21, 2022	9:00 AM	Webinar Teleconference	David M. Bellusci

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The meeting of the Actuarial Committee was called to order at 9:00 AM following a reminder of applicable antitrust restrictions, with Mr. David Bellusci, Executive Vice President and Chief Actuary, presiding.

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Approval of Minutes

The Minutes of the meeting held on February 15, 2022 were distributed to the Committee members in advance of the meeting for review. As there were no corrections to the Minutes, a motion was made, seconded and unanimously approved to adopt the Minutes as written.

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Item AC20-08-04

Impact of Economic Downturn on Pure Premium Rate Indications

Staff presented an updated analysis of economic changes related to the COVID-19 pandemic and their impacts on the indicated September 1, 2022 pure premium rates. This analysis included measured and forecast impacts on claim frequency, claim severity, and the statewide average wage. These impacts were largely due to changes in the industrial mix of employment, which was also presented.

Industrial Mix of Employment

Staff presented industry level employment information from economic forecasts from December 2019 through March 2022. Staff noted that employment in many industries has recovered to 2019 levels and remaining employment loss is concentrated in a few industries and nearly all industries are expected to fully recover by the 2024 forecast horizon. Finally, staff noted that the Russia-Ukraine war was contemplated in the underlying forecast with the assumption that economic sanctions would remain in effect throughout the forecast horizon.

Indemnity Claim Frequency

The Committee was reminded that the WCIRB indemnity frequency model projects changes in mix-adjusted non-cumulative indemnity claim frequency using an economic variable as one dependent variable. Staff presented the forecast values of the statewide unemployment rate and aggregate employment that underly the economic variable in the WCIRB model. Staff then presented the annual frequency changes predicted based on values in the current economic forecast, as well as changes that would have been predicted by past forecasts.

Finally, staff presented updated measurements of historic and forecast frequency changes due to changing industrial mix. These changes were -2.82%, +0.56%, +0.44%, -0.52%, and +0.04% in accident years 2020 through 2024, respectively.

Indemnity Claim Severity

Staff presented updated measurements of changes in claim severity due to changing industrial mix. Using updated economic forecasts, the estimated severity changes due to shifts in industrial mix were summarized as follows:

Accident Year	Severity Change Due to Industrial Mix		
	Indemnity	Medical	Total
2020	1.48%	1.17%	1.33%
2021	-0.04%	0.00%	-0.02%
2022	-0.55%	-0.46%	-0.51%
2023	0.00%	-0.02%	-0.01%
2024	0.03%	0.02%	0.03%

Statewide Average Wage

The Committee was shown the current forecasts of changes in the statewide average wage, based on the average of November 2021 Department of Finance (DoF) and March 2022 UCLA forecasts. These changes were 11.4% in 2020, 8.0% in 2021, 2.8% in 2022, 2.0% in 2023, and 2.1% in 2024. Staff noted that both the 2020 and 2021 changes had increased with each new forecast for both the DoF and UCLA forecasts.

Staff presented an updated analysis of estimated changes in statewide average wage due to changes in industrial mix. The WCIRB has produced two methods of measuring this impact. The first, using Occupational Employment Survey data from the Bureau of Labor Statistics (BLS), was available only for

historic years and was used to assess the reasonableness of the second method. This method estimated a 2.0% average wage change in 2020 due to shifts in industrial mix and a -0.2% change in 2021. The second method, using employment figures from the UCLA forecast and historic wage relativities from the BLS Quarterly Census of Employment and Wages, estimated average wage changes due to shifts in industrial mix of 1.8% in 2020, -0.3% in 2021, -0.5% in 2022, 0.3% in 2023, and 0.1% in 2024. Staff recommended using these estimated impacts in the same manner as the September 1, 2021 pure premium rate filing. The Committee preliminarily agreed to this recommendation.

Staff presented an updated analysis of average wage changes due to changing distributions of employment by wage level within industries using UCLA forecast data, American Community Survey (ACS) data, and Current Population Survey (CPS) data.

Impact of Wage Distribution in 2020 and 2021

Staff detailed the derivation of the statewide average wage using observed 2019 levels of industry mix from the UCLA forecast, wage distribution within industry from ACS data, and average wage by industry and wage quartile from ACS data. This calculation served as the baseline overall wage level in the estimate.

Staff detailed the derivation of the average wage using 2020 wage levels by industry using the general approach adopted by the Committee for use in the September 1, 2021 Pure Premium Rate Filing. This average wage was calculated using the observed 2019 industry mix and average wages by industry and quartile. These values were combined with the 2020 wage distribution by industry from ACS data. Staff noted that the resulting average wage reflected only changes in the wage distribution within industries, as the only difference between this value and the observed 2019 value was the distribution of employees by wage level within industries. Staff recommended using the overall estimate of the impact of the changing wage distributions within industries of 3.9% to adjust the 2020 average wage growth estimate for pure premium ratemaking purposes. The Committee agreed with this recommendation.

Staff detailed an analogous calculation for 2021, with the only difference being that CPS data was used for wage information instead of ACS data. Staff noted this data was used to derive the 4.3% estimate for 2020 used in the September 1, 2021 rate filing. Staff recommended using the overall estimate of the impact of the changing wage distributions within industries of 1.8% to adjust the 2021 average wage growth estimate for pure premium ratemaking purposes. The Committee agreed with this recommendation.

Impact of Wage Distribution in Future Years

Staff noted that while the 2020 and 2021 changes in the statewide average wage were artificially inflated by the loss of lower wage employees within industries from the workforce, changes in future years would be artificially deflated by the return of at least some of these employees to the workforce.

Staff presented the impact under various assumptions as to the return of the workforce to the pre-2020 wage distribution within industries. The scenarios ranged from the complete return to the previous wage distribution to no future changes. The scenarios were defined as follows:

- Full Unwinding: Assumed that the measured 5.7% 2020-2021 impact on the statewide average wage would fully reverse over the 2022-2024 forecast horizon.
- No Unwinding: Assumed that changes to the wage distribution within industries were permanent.
- Proportional to Industry Mix: Assumed that impacts on the statewide average wage from the change in the wage distribution within industry will reverse in proportion to the reversal due solely to industrial mix.
- Midpoint: Assumed a reversal halfway between the Full Unwinding and Proportional to Industry Mix scenarios.

As was the case in preparation for the September 1, 2021 rate filing, staff noted that a prevailing thought among economists is that much of the low wage employment will return, but due to acceleration in automation trends and other factors, some of the change in the wage distribution is permanent. Given the magnitude of the impact of the wage distribution relative to impact of shifts in industrial mix, staff believed an unwinding greater than proportional to industry mix is reasonable. Combined with the sparsity of forecasts on the subject, staff recommended the midpoint scenario that was also reflected in the September 1, 2021 Premium Rate Filing.

The Committee agreed with this recommendation.

Item AC21-03-03

Review of COVID-19 Claim Diagnostics

Staff summarized several COVID-19 claim-related diagnostics based on the WCIRB's aggregate financial data calls, unit statistical reports and indemnity transaction data. Staff presented diagnostics showing the patterns of COVID-19 indemnity claims by accident month and industry. It was noted that, while the number of COVID-19 claims had decreased dramatically in the second quarter of 2021, there was a significant increase starting in the third quarter of 2021 with the Delta variant and continuing in the fourth quarter of 2021 with the Omicron variant.

Staff showed the age distribution of injured workers and shared that injured workers age 50 and older represent a significant share of COVID-19 death claims. Staff presented estimates of the incurred severity for accident year (AY) 2020 and 2021 COVID-19 and non-COVID-19 indemnity claims. A Committee member requested information about the incurred severity for COVID-19 death claims. The death claim incurred severities for AY 2020 are shown below:

	Medical	Indemnity	Total
COVID-19	98,419	168,158	266,577
Non-COVID-19	22,835	230,604	253,439

Staff noted that unlike non-COVID-19 indemnity claims, a significant share of COVID-19 indemnity claims have incurred indemnity loss but no medical loss at first unit statistical report. Based on indemnity transaction data, these claims often involve two or fewer weeks of paid indemnity benefits and close more quickly than COVID-19 claims with both incurred medical and indemnity losses, but a small share have 6 or more weeks of paid temporary disability benefits. A Committee member suggested that claims currently classified as indemnity-only may have outstanding liens for medical costs and this may be part of the reason that the number of lien filings have remained flat while claim frequency decreased in AY 2020.

Staff shared a comparison of incurred indemnity and incurred medical severities on COVID-19 and non-COVID-19 claims by open/closed status and by medical-only/indemnity-only/indemnity-medical classification. Staff showed that, while the estimated medical severity on COVID-19 indemnity claims is significantly lower than for non-COVID-19 indemnity claims, the estimated medical severity on open COVID-19 indemnity-medical claims is higher than that for non-COVID-19 indemnity-medical claims. The Committee was advised that this is driven by a relatively large number of open COVID-19 that are over \$1 million. Staff showed the distributions of incurred losses for both COVID and non-COVID claims and shared that, while most of COVID-19 claims have incurred losses less than \$5,000, the share of COVID-19 claims over \$500,000 was four times more than for non-COVID-19 claims.

Staff observed that COVID-19 claims are currently more likely to be classified as Temporary Total or Death than non-COVID-19 claims. Staff highlighted that COVID-19 indemnity claims close more quickly than non-COVID-19 indemnity claims both due to the higher share of indemnity-only claims as well as faster closing rates for indemnity-medical claims.

Item AC21-03-05

Pandemic Impact on Premium Measures

The Agenda included an updated analysis of the potential impact of the COVID-19 pandemic on insurer earned premium used for aggregate ratemaking, which was first reviewed by the Committee at the March 16, 2021 meeting. Staff noted that the updated analysis of calendar year 2021 earned premium showed that it included an atypically significant amount of return premiums from 2019 policies. If premiums are not adjusted, the accident year 2021 loss ratio would be distorted on a pure premium ratemaking basis. Staff summarized the recommended adjustment to earned premium to correct for this distortion, which is similar to the approach used to correct for similar audit premium anomalies occurring during the Great Recession. Staff noted that the adjustment resulted in a moderate increase to earned premiums for 2021 and a modest decrease to 2020. After discussion, the consensus of the Committee was that the adjustments recommended by staff should be included in the analysis of insurer loss experience.

Item AC21-12-07 Indemnity Claim Frequency Model

The Committee was reminded that at the December 9, 2021 meeting, the Committee accepted a report on the WCIRB's indemnity claim frequency model and agreed that the recommended model enhancements should preliminarily be reflected in the updated model forecast for December 31, 2021 experience to be reviewed at the March 21, 2022 meeting. The Agenda included the updated model forecast based on December 31, 2021 experience.

Staff shared details about the implementation of the model enhancements, projections based on current data and analysis of the historical relationship between changes in the cumulative injury index and changes in non-cumulative frequency. Several Committee members expressed concern with respect to the model forecasts given the unusual patterns in the current data, particularly with respect to the sharp increase in cumulative injuries in 2020 based on preliminary data. A Committee member requested information as to changes in cumulative injury claims by industry, which staff agreed to provide at the April 14, 2022 meeting.

Following a lengthy discussion, staff suggested using the model enhancements approved at the December 9, 2021 meeting including the forecast values of the cumulative injury index based on the preliminary accident year 2020 experience in the indemnity frequency change projection in the updated preliminary analysis of December 31, 2021 experience to be reviewed at the April 14, 2022 meeting. Staff also suggested continuing to investigate alternative methods to project the indemnity claim frequency change in light of non-cumulative frequency and the cumulative injury index changing in opposite directions in 2020. The Committee supported the staff recommendations.

Item AC22-03-01

First Quarter 2022 Diagnostics

The Agenda included the WCIRB's standard set of diagnostics that are reviewed by the Actuarial Committee and Claims Working Group on a semi-annual basis. Among the diagnostics discussed by the Committee were the following:

1. There was a decrease in both medical-only claims and some smaller indemnity claims throughout the pandemic period.
2. The Committee reviewed the claim settlement rate patterns through the fourth quarter of 2021. It was noted that current claim settlement rates were showing signs of plateauing following a decline during the pandemic period. A member suggested that the Claims Working Group provide feedback on the matter.
3. The share of cumulative injury to total indemnity claim counts for 2020 increased significantly across all regions. Staff noted that this increase was counter to some of the preliminary indications reviewed over the last year based on WCIRB indemnity transaction data. Staff noted that it planned to review these differences. The Committee recommended that cumulative injury claims continue to be monitored and suggested that staff review changes in cumulative injury claims by industry sector.
4. The number of claims in excess of \$1 million incurred in policy year 2019 at the first report level was at a historical high level. Likewise, the number of claims in excess of \$500K and \$250K followed a similar pattern. A member suggested soliciting feedback on the issue from the Claims Working Group.
5. Retrospective evaluations of the performance of alternative loss development methodologies indicate that paid development methodologies generally continue to outperform the other methods reviewed. Staff noted that the evaluations also showed that claim settlement adjustments were continuing to improve the accuracy of the paid projections.

Item AC22-03-02 12/31/2021 Experience Review

Staff presented a summary of the preliminary analysis of statewide accident year experience evaluated as of December 31, 2021 (excluding COVID-19 claims), which was included in the Agenda. It was noted that the analysis included in the Agenda was preliminary in that it did not fully address several open issues for the September 1, 2022 Pure Premium Rate Filing that were discussed in other Agenda items. During the discussion, the Committee noted the following:

- Paid indemnity loss development for the fourth quarter of 2021 was emerging generally consistent with recent prior quarters. Paid medical loss development for the fourth quarter of 2021 was continuing to increase, in part driven by the updates to medical fee schedules adopted by the Division of Workers' Compensation in the first quarter of 2021. The adjustments to paid medical loss development for the 2021 medical fee schedule changes adopted by the Committee at the December 9, 2021 meeting were reflected in this summary based on the WCIRB's prospective estimates of the changes that were reflected in the September 1, 2021 Pure Premium Rate Filing and will be updated with the preliminary retrospective estimates at the next meeting. The overall modest increase in the developed medical loss ratios since the fourth quarter of 2020 was driven by increased payments at less mature periods.
- The recent decline in indemnity claim settlement rates has begun to moderate in the third and fourth quarters of 2021. However, indemnity claim settlement rates for accident years 2018 to 2020 as of December 31, 2021 are still below the prior year. Given these patterns, staff recommended continuing to reflect the adjustment to paid loss development for changing claim settlement rates.
- The summary included loss development projections based on the two-year average paid age-to-age factors through 108 months, which was the approach used in the September 1, 2021 Pure Premium Rate Filing to mitigate the impact of the pandemic-period development emerging in 2020. Given that the latest year development emerging in 2021 is less distorted by the pandemic and the WCIRB generally relies on latest year development to be responsive to recent patterns, staff recommended reflecting the latest year adjusted age-to-age development in the updated summary of December 31, 2021 experience to be reviewed at the next meeting. The consensus of the Committee was that this approach was appropriate.
- The estimated intra-class indemnity claim frequency change for accident year 2021 based on the preliminary measure of changes in indemnity claim counts compared to changes in statewide employment levels showed a significant increase following the significant decrease in 2020. In combination, the estimated frequency change from 2019 to 2021 was a modest increase generally comparable to the pre-pandemic period. Staff noted the preliminary frequency projections reflected in the updated summary of December 31, 2021 experience to be reviewed at the next meeting will be based on the Committee's discussion of the frequency model projections (see Minutes for Item AC21-12-07).
- Average on-level indemnity severities show an overall moderate increase for accident years 2018 through 2020 and a modest decline for 2021. Average on-level medical severities show a moderate increase for accident year 2018, modest decreases for 2019 and 2020, and a larger decrease for 2021. The decrease for 2021 may be impacted by shifts in the distribution of the types of claims filed in the early-pandemic and later periods with a return of smaller indemnity claims filed in 2021 that were not filed in 2020. Staff noted that, given this information, the preliminary projected average annual indemnity severity trend of 1.0% and annual medical

severity trend of 1.0% reflected in the Agenda and in the September 1, 2021 Pure Premium Rate Filing continue to be reasonable bases for the updated summary of December 31, 2021 experience to be reviewed at the next meeting.

- Given the significant and likely temporary impact of the pandemic on accident year 2020, staff recommended to continue not using accident year 2020 as a basis for the loss ratio projection. Given that accident year 2021 is projected from only 12 months and may also include some impact of the pandemic, staff recommended basing the projection on the average of accident years 2019 and 2021. The consensus of the Committee was that this approach should be reflected in the updated summary of December 31, 2021 experience to be reviewed at the next meeting.

The Committee was reminded that a full range of alternative loss development and trending projections will be reviewed at the next meeting at which the recommended methodologies for the September 1, 2022 Pure Premium Rate Filing will be determined.

The meeting was adjourned at 12:30 PM.

Note to Committee Members: These Minutes, as written, have not been approved. Please refer to the meeting scheduled for June 28, 2022 for approval and/or modification.