To: **Legislative Service Commission**
Chair, Senate Transportation, Commerce and Workforce Committee
Chair, Senate Insurance and Financial Institutions Committee
Chair, House Insurance Committee

From: **Chan Cochran, Chair, Ohio Bureau of Workers' Compensation Board of Directors**

Date: October 26, 2023

Re: **2023 Annual Actuarial Estimate of Unpaid Liabilities – ORC 4121.125**

Attached you will find the report as required under Ohio Revised Code 4121.125 that provides a summary of the 2023 Bureau of Workers' Compensation (BWC) annual actuarial analysis of unpaid liabilities for the state insurance fund and all other funds under the purview of BWC found under Chapters 4121., 4123., 4127., and 4131. of the Revised Code.

This year's executive summary report, prepared for the Board by credentialed members of BWC's Actuarial staff, provides as required:

1) A summary of the funds and components evaluated.
2) A description of the actuarial methods and assumptions used in the analysis of the unpaid liabilities.
3) A schedule showing the differences in estimates of unpaid liabilities since the previous annual actuarial analysis report, which was prepared by credentialed members of BWC's Actuarial staff.

Copies of the more detailed reports that cover each of the specific funds and the components of the funds in much more detail are available from BWC staff upon request. Please feel free to contact the Chief Actuary, Dan Myers (daniel.m.1@bwc.ohio.gov), if you have questions with respect to information contained in this executive summary report.

Ohio Bureau of Workers Compensation
BWC Actuarial Division

Estimated Unpaid Loss and Loss Adjustment Expenses as of 6-30-2023

Executive Summary
Prepared August 2023

Purpose and Disclaimers

The purpose of this document is to detail in writing the internal process for estimating financial reserves, which include the results, assumptions, and methodologies of the BWC Actuarial Division's analysis. This report is created pursuant to Ohio Revised Code 4121.125 and is subject to public records requests. Using this report for purposes other than its stated purpose may result in misuse and incorrect information being represented.

In the Actuarial Division's actuarial analysis, a central estimate of unpaid losses and loss adjustment expenses is determined for the various funds detailed below. An actuarial central estimate represents an expected value over the range of reasonably possible outcomes. Such range of reasonably possible outcomes may not include all possible outcomes. We note that our estimates are subject to the uncertainty inherent in estimating unpaid losses and loss adjustment expenses. As it is necessary to project future payments, these amounts may vary from the projection. No warranty is expressed that such variance will or will not occur.

Synopsis

We have completed the BWC Actuarial Division's unpaid loss and loss adjustment expense analysis for the State Insurance Fund (SIF), which includes

- Private Employers (PA),
- Public Employers Taxing Districts (PEC),
- Public Employers State Agencies (PES), and
- Self-Insured Mandatory Fund (SI-Mand).

Additionally, Disabled Workers' Relief Fund (DWRF), Self-Insured Employer Guaranty Fund (SIEGF), Marine Fund (MIF), and Public Workers Relief Fund (PWRF) unpaid loss and loss adjustment expense analysis was completed.

Loss adjustment expenses refer to the costs associated with handling, evaluating, assessing, and settling workers' compensation insurance claims. Loss adjustment expenses include the

- Administrative Cost Fund (ACF),
- Health Plan Partnership (HPP), and
- Pharmacy Benefit Manager (PBM).

An analysis was not done for Coal Workers Pneumoconiosis (CWPF) by the BWC. BWC Management relied solely on the external actuarial consultant for the estimate of unpaid loss and loss adjustment expenses for this fund. For the 6-30-23 analysis, Deloitte was the external actuarial consulting firm, the same as the 6-30-22 analysis. While the results of the report are summarized here, the analysis details are not summarized. Deloitte's analysis was reviewed thoroughly and found to be reasonable.

Estimated Unpaid Loss as of 6-30-23 (in millions)

Fund	Sub Fund	Nominal Unpaid Loss Estimate	Discounted Unpaid Loss Estimate
SIF	PA	$11,932.2	$7,713.6
	PEC	$2,433.3	$1,547.1
	PES	$683.4	$446.8
	SI-Mand	$81.4	$51.2
DWRF	DWRF I	$367.9	$285.5
	DWRF II	$2,583.5	$1,260.1
SIEGF	Loss	$404.1	$242.8
	DWRF	$134.9	$82.5
MIF	Loss	$1.3	$1.0
PWRF	Loss	$1.7	$1.1
CWPF	Loss	$214.8	$74.9
Total Loss		**$18,838.6**	**$11,706.5**

Estimated Unpaid Loss Adjustment Expense as of 6-30-23 (in millions)

Fund	Sub Fund	Nominal Unpaid Loss Estimate	Discounted Unpaid Loss Estimate
ACF	SIF	$1,386.6	$894.3
	SIEGF	$37.0	$22.3
	DWRF	$2.8	$1.5
	DWRF SIEGF	$0.1	$0.1
	MIF	$0.1	$0.1
	PWRF	$0.2	$0.1
	CWPF	$19.7	$6.9
HPP	PA, PEC, PES	$1,062.4	$685.2
	SI	$9.2	$5.5
	MF	$0.1	$0.1
	PWRF	$0.1	$0.1
	CWPF	$25.5	$8.7
PBM	PA, PEC, PES	$18.7	$13.8
	SI	$0.4	$0.3
Total LAE		**$2,562.9**	**$1,638.8**

Overall Summary

Commentary on Previous Accident Year Estimated Ultimate Losses

Overall, the estimated ultimate losses for the State Insurance Fund decreased slightly, mostly due to the impact of an additional year of paid loss data indicating lower levels of future costs than were indicated in prior estimates for claims that occurred prior to 2023 for Private Employers. The decrease can particularly be seen in accident years 2002 – 2022, as built in conservatism is brought down as results are coming in more favorably than initially anticipated.

While we anticipate changes every quarter and year, the current change in estimated ultimate losses from last year is not unreasonable nor cause for concern.

Change in Estimated Ultimate Loss Excluding Current Accident Year (in $ millions)

Fund	Ultimate Loss as of 6-30-2023	Ultimate Loss as of 6-30-2022	Difference (in $)	Difference (in %)
PA	51,934.6	52,204.3	(190.7)	-0.4%
PEC	8,405.3	8,402.5	10.4	+0.1%
PES	2,612.5	2,612.7	4.4	+0.2%
Total	**62,952.4**	**63,219.5**	**(175.9)**	**-0.3%**

While estimated ultimate losses decreased for PA and SIF in total, PEC and PES shows a slight increase. This is a result of allocating a slightly higher portion of the losses to PEC and PES due to increases in case reserves for PEC and PES relative to PA as of 6-30-2023. Overall, the estimated ultimate losses for previous accident years were fairly stable.

Commentary on Current Accident Year Losses

For the most recent accident year, 2023, the overall estimated ultimate losses for PA, PEC, and PES are very slightly higher than accident year 2022. We believe that the historical trends in losses are returning to a normal decrease after seeing accident year losses increase after the Covid-19 downward spike.

Right now, accident year 2023 PA, PEC and PES ultimate losses are estimated to be approximately 0.51% more (0.50% more for medical and 0.52% more for indemnity) than accident year 2022, and 2.9 % more than accident year 2021 ultimate losses.

For DWRF, we intentionally select a conservative estimate of ultimate losses for accident year 2023, as by the very nature of this cost-of-living adjustment benefit, there have been no DWRF awards made yet for events occurring during this accident year. Additionally, the currently high inflationary environment creates the potential for higher future claim development. As more claims are awarded PTD benefits and are subsequently eligible to receive DWRF benefits, the estimated ultimate DWRF loss for accident year 2023 will converge towards its actual amount many years from now.

There has so far been only one claim associated with Self-Insured employers that have defaulted on their claim obligations in 2023, and with no claims in accident year 2023. As the year develops, more employers could default causing additional claims to be added to the inventory in the BWC-operated Guaranty Fund. The BWC is responsible for handling these defaulted claims on behalf of the SI Community.

Commentary on the Fiscal Year Payments

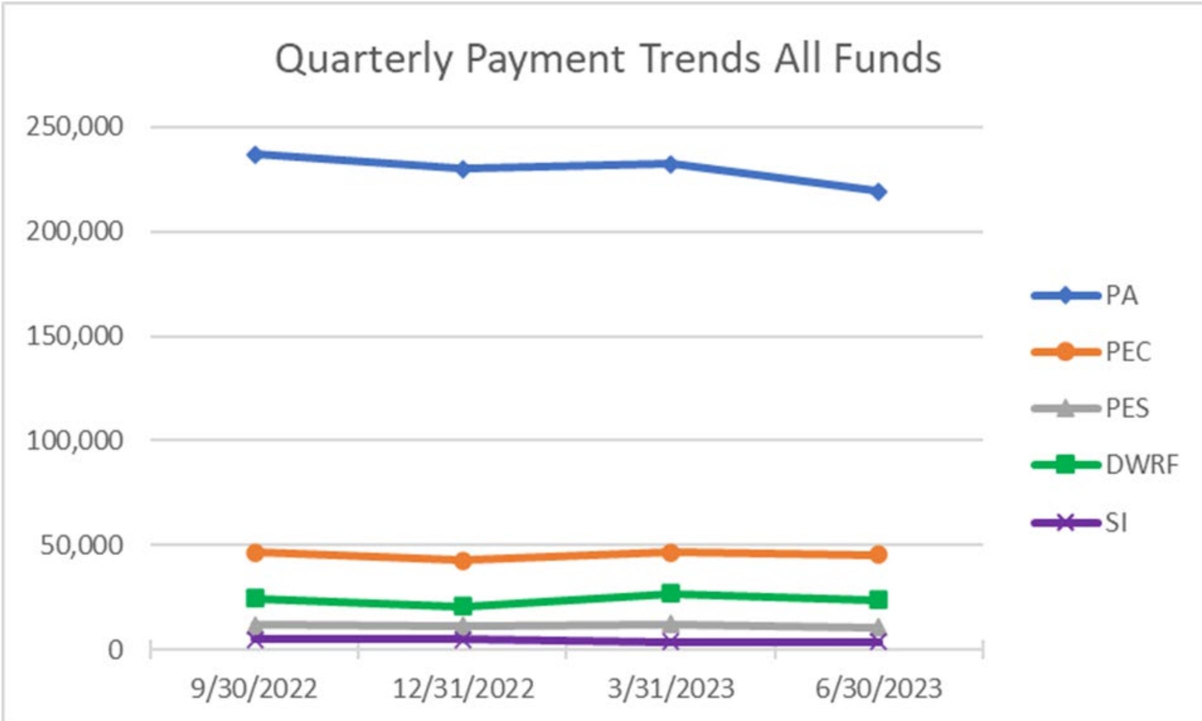
Fiscal year 2023 payments were, overall, lower than fiscal year 2022 payments, and this was driven by a decrease in payments for Private Employers. Fiscal year 2022 had higher payments than the fiscal year 2021, due to the heavy impact of the effects of Covid-19 on Ohio businesses in fiscal year 2021. However, in fiscal year 2023, we saw a return to the usual decreasing trend in payments that we were seeing before Covid-19 effected loss payments.

As shown in the following chart and graphs, the quarterly payments on an all-accident year combined basis have decreased during the fiscal year, especially in Private Employers. An exception to this pattern is the Disabled Workers' Relief Fund, which is more cyclical in nature, as it is paid out every two weeks. Disabled Workers' Relief Fund also saw an increase in payments in the most recent quarters, as a new cohort of claims became eligible for DWRF benefits at the beginning of the year, due to a large cost of living adjustment impacting the DWRF threshold. There is also a slight cyclical nature for Indemnity payments, but that is tempered by the non-cyclical medical benefits that are paid.

Change Quarterly Payments (in $ thousands)

Fund	Payments 7/1/2022 to 9/30/2022	Payments 10/1/2022 to 12/31/2022	Payments 1/1/2023 to 3/31/2023	Payments 4/1/2023 to 6/30/2023
PA	237,024	230,001	232,167	219,328
PEC	46,731	42,657	46,547	45,282
PES	11,731	11,536	12,149	10,640
DWRF	24,460	20,677	26,955	23,758
Defaulted SI	4,902	4,831	3,977	4,006

*Note that payments shown are gross of pharmacy rebates and hospital overpayments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200,000
150,000
100,000
50,000
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9/30/2022
12/31/2022
3/31/2023
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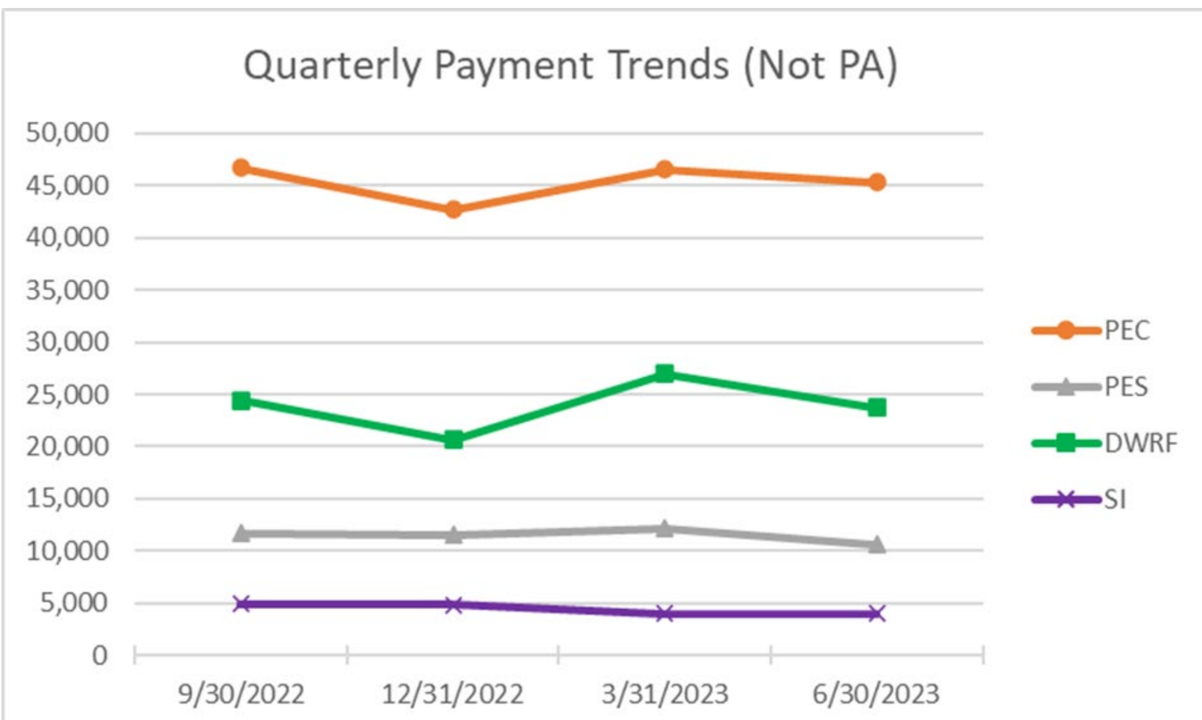
PA
PEC
PES
DWRF
SI


Quarterly Payment Trends (Not PA)
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
9/30/2022
12/31/2022
3/31/2023
6/30/2023
PEC
PES
DWRF
SI

Commentary on Estimated Unpaid Losses (All Accident Years)

Estimated Discounted Unpaid Loss as of 6-30-23 (in $ thousands)

Fund	Sub Fund	6-30-2023 Discounted Unpaid Loss Estimate	6-30-2022 Discounted Unpaid Loss Estimate	Difference (in $)	Difference (in %)
SIF	PA	7,713,596	7,824,665	-111,069	-1.4%
	PEC	1,547,084	1,543,362	3,722	0.2%
	PES	446,797	438,981	7,816	1.8%
	SI	51,174	55,524	-4,350	-7.8%
DWRF	DWRF I	285,524	291,534	-6,010	-2.1%
	DWRF II	1,260,137	1,172,991	87,146	7.4%
SIEGF	Loss	242,843	246,625	-3,782	-1.5%
	DWRF	82,454	81,266	1,188	1.5%
MIF		978	942	36	3.8%
PWRF		1,058	1,106	-48	-4.3%
CWPF*		74,883	73,464	1,419	1.9%
Total Loss		**11,706,527**	**11,730,460**	**-23,933**	**-0.2%**

* CWPF is from Deloitte's 6-30-2022 and 6-30-2023 reserve analysis

Estimated unpaid losses for PA, PEC, and PES employers remained very stable overall, with the increases in PEC and PES being offset by the larger decrease in PA. The changes for all three employer types are in part due to changes in the reserve allocation, as mentioned in an earlier section of this report.

Most of the increase in estimated discounted unpaid loss is in DWRF. As expected, the DWRF I estimated unpaid loss decreased as it is continuing to run off its inventory of pre-1987 accident year claims. DWRF II estimated unpaid losses increased this year, due to a large cost of living adjustment that impacted the DWRF threshold beginning in the first quarter of 2023. This large cost of living increase, along with the cost of living increase we saw in 2022, will have a compounding impact in raising the costs for DWRF benefits, especially in DWRF II, as the claims in this fund still have many more years of payments until they are closed.

Defaulted Self-Insured Employers reserves in total decreased significantly from the prior year. There was significant built-in conservatism in the Defaulted Self-Insured Employers reserves, due to a new methodology that was implemented in the previous year. This year, we took some of that excess conservatism away. Of note, we do not have a provision for reserves for claims associated with SI policies that have yet to default.

Marine Fund and Public Workers Relief Fund had relatively little change in estimated unpaid loss from last year.

We note that when estimating future loss payments, it is certain that actual future payments will not equal the projected amount and the timing of those payments may very likely differ from the expected timing.

The unpaid ACF and HPP expense costs are estimated based upon a percentage of the estimated unpaid losses. ACF costs over time have remained very stable, with a slight decrease in the expected future costs due to a decrease in the underlying unpaid losses. Future HPP expense costs increased slightly, due to increases in the selected unpaid-to-unpaid ratios from 6-30-22.

The estimated PBM unpaid expenses decreased compared to last year, due to continuing decreases in claim frequency and Pharmacy usage.

Estimated Unpaid Loss Adjustment Expense as of 6-30-23 (in $ thousands)

Fund	Sub Fund	6-30-2023 Discounted Unpaid LAE Estimate	6-30-2022 Discounted Unpaid LAE Estimate	Difference (in $)	Difference (in %)
ACF	PA, PEC, PES	889,605	893,345	-3,740	-0.4%
	SI	4,690	5,058	-368	-7.3%
	SIEGF	22,254	22,466	-212	-0.9%
	DWRF	1,467	1,406	61	4.3%
	DWRF SIEGF	78	78	0	0.0%
	MIF	90	86	4	4.7%
	PWRF	97	101	-4	-4.0%
	CWPF	6,862	6,692	170	2.5%
HPP	PA, PEC, PES	685,210	682,007	3,203	0.5%
	SI	5,548	5,397	151	2.8%
	MIF	68	65	3	4.6%
	PWRF	79	82	-3	-3.7%
	CWPF	8,717	8,427	290	3.4%
PBM	PA, PEC, PES	13,750	15,477	-1,727	-11.2%
	SI	317	362	-45	-12.4%
Total LAE		**1,638,834**	**1,641,049**	**-2,215**	**-0.1%**

Fund	6-30-2023 Discounted Unpaid Loss & LAE Estimate	6-30-2022 Discounted Unpaid Loss & LAE Estimate	Difference (in $)	Difference (in %)
Total Loss and LAE	**13,345,361**	**13,371,509**	**-26,148**	**-0.2%**

Analysis Methodology

The methods used to estimate the unpaid losses by accident year include paid loss development, Bornhuetter-Ferguson using both payroll and premium exposures, and frequency-severity development method.

Under the paid development method, the selected loss development factors are estimated based on historical payment development. These selected loss development factors are multiplied to the latest cumulative paid losses to estimate the ultimate amount. This method is very frequently used in actuarial analyses but is less useful in situations where there is little payment development in the first few years.

The Bornhuetter-Ferguson (BF) methods are based on the percentage paid to date, as determined by the paid development method, and an exposure basis, such as payroll and premium. In this method a loss cost (for a payroll exposure basis) or a loss ratio (for a premium exposure basis) is selected for each accident year. This selected loss cost or loss ratio is multiplied by the exposure basis for that given accident year to estimate an ultimate loss. Then the percentage unpaid to date, which is 100% less the percentage paid to date, is multiplied by this estimated ultimate loss to estimate the unpaid loss for this method. In the 6-30-23 BWC analysis, the premium used in the BF method was on-leveled to 2023 rate levels for all years, so that the impact of the rate changes over the past several years are mitigated. This method is less responsive than the paid loss development method but allows for estimates in accident years where there has been very little development.

The frequency-severity method is a new method that we started using this fiscal year to assist in estimating unpaid losses. It estimates a frequency component and severity component separately. The frequency component is an estimate of ultimate claim counts for each accident year, while the severity component represents the average ultimate amount paid per claim for each benefit. Both ultimate claim counts and ultimate severities are derived from a combination of chain ladder development and a Bornhuetter-Ferguson technique, as mentioned above, but using claim counts and average amount paid per claim as the basis, rather than paid losses. The results of the frequency estimate and the results of the severity methods are multiplied together to get the final results for the frequency-severity method.

For estimating the unpaid loss for DWRF, we also used a paid-to-paid method. This method looks at the ratio of DWRF payments to PTD payments over the development periods. A selected ratio development factor is selected, similar to the paid development method. Then the future ratio of DWRF to PTD payments are estimated using the current ratio multiplied by the ratio development factors. These estimated ratios are multiplied by the estimated future

PTD payments, as determined by the paid development method, to get an estimated unpaid DWRF loss.

For DWRF, we include a modified frequency-severity method. The modification manifests itself in the severity component by taking into account the effects of the Cost-of-Living adjustment (COLA). The amount of DWRF paid on a claim is adjusted every year due to changes in the Social Security Administrations Cost-of-Living Adjustments that apply every year on January 1st. To estimate the severity component, we remove the historical COLA trends from the data before development, and then add in projected future COLA trends. This leads to results that are less impacted by volatility in the COLA.

To estimate unpaid loss adjustment expenses for the Administrative Cost Fund and the Health Plan Partnership Fund, we used a variation of the Classical (Traditional) Paid to Paid Technique for estimating unpaid unallocated loss adjustment expenses. This method assumes that half of the claim adjustment expenses are paid in the year the injury occurs and the other half is paid as future claim payments are made. We also assumed that 15% of the loss IBNR is related to future claims (Pure IBNR).

Historical ratios of paid loss adjustment expenses to total claim payments by fiscal year are calculated, and a selected future paid-to-paid ratio was selected. We then applied a modifier, which is based on applying 50% to case reserves and estimated future development on known claims (IBNR related to already reported claims), and 100% to pure IBNR, to the selected paid-to-paid ratio to calculate an unpaid LAE ratio. We multiplied the unpaid LAE ratio by the unpaid losses for each employer type to calculate our estimate of unpaid loss adjustment expenses.

Identification

This report has been prepared by Jeana Holewinski, FCAS, MAAA, AINS. I am an actuary employed by the Ohio Bureau of Workers' Compensation and meet the qualification standards of the American Academy of Actuaries to issue this report. This report adheres to all applicable Actuarial Standards of Practice.