MILLIMAN REPORT

Actuarial Valuation of The State Income Continuation Insurance Plan

As of December 31, 2023

April 23, 2024

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April 23, 2024

Jim Guidry
Director
Benefit Services Bureau
Wisconsin Department of Employee Trust Funds
Madison, WI 53707

RE: Actuarial Valuation of State Income Continuation Insurance Plan as of December 31, 2023

Dear Jim,

Thank you for the opportunity to perform an actuarial valuation of the State Income Continuation Insurance (ICI) plan as of December 31, 2023. The valuation results include estimated liabilities and financial projections for the State ICI plan, which are provided in this report along with documentation of the data, assumptions, and methods used in our analysis.

The State of Wisconsin Department of Employee Trust Funds (ETF) has determined that the State ICI plan is not subject to the provisions of GASB 74, which govern the financial reporting of Other Post-Employment Benefits (OPEBs) and require the use of pension accounting methods, including the calculation of a liability for active lives. We have therefore performed this valuation based on GASB 10 guidelines ("Accounting and Reporting for Risk Financing and Related Insurance Issues") which do not require the calculation of a liability for active lives. This approach is consistent with prior valuation work performed on the State ICI plan. Ultimately it is the responsibility of ETF and its auditors to determine the applicable accounting standards for the plan.

We used a discount rate of 6.8% for estimating State ICI liabilities as of December 31, 2023, and for projecting investment income for the State ICI reserve in our financial projections. This discount rate is consistent with last year's discount rate assumption. This discount rate was specified by ETF and is based on the most recent WRS Experience Study performed by GRS. We have performed no independent assessment of the reasonableness of this assumption. ETF is solely responsible for establishing the assumption and communicating any changes to Milliman for the purpose of this valuation.

This report is prepared solely for the internal business use of ETF. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third-party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a release agreement, subject to the following exceptions:

a) ETF may provide a copy of Milliman's work, in its entirety, to ETF's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit ETF; and

b) ETF may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third-party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by ETF and The Hartford, including historical claim and expense data. While Milliman has not audited this data, we have reviewed it for reasonableness and it is, in our opinion, sufficient and reliable for the purposes of our calculations. If any of this information is inaccurate or incomplete, the results shown could be materially affected and this report may need to be revised.

This analysis is only an estimate of the State ICI plan's financial condition as of a single date. It can neither predict the plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of benefits, only the timing of employer contributions. While this report is based on the assumptions documented here, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. ETF has the final decision regarding the appropriateness of the assumptions and actuarial valuation methods.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices.

I, Maxwell E. Berube, FSA, MAAA am a consulting actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Paul L. Correia, FSA, MAAA, am a consulting actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Daniel D. Skwire, FSA, MAAA, am a consulting actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

Maxwell Berube

Maxwell E. Berube, FSA, MAAA
Consulting Actuary
Milliman, Inc.

Paul Correia

Paul L. Correia, FSA, MAAA
Principal and Consulting Actuary
Milliman, Inc.

Daniel D. Skwire, FSA, MAAA
Principal and Consulting Actuary
Milliman, Inc.

Executive Summary

The actuarial liabilities for the State ICI plan as of December 31, 2023 are summarized in Table 1.1 below:

TABLE 1.1
ACTUARIAL LIABILITIES FOR THE STATE ICI PLAN AS OF DECEMBER 31, 2023

LIABILITY COMPONENT	BASIC BENEFITS	SUPPLEMENTAL BENEFITS	$75 ADD-ON	TOTAL LIABILITY
Open Claims	$74,217,084	$3,629,528	$220,470	$78,067,082
IBNR Claims	$2,636,335	$128,928	$7,832	$2,773,094
Loss Adjustment Expenses	$4,044,391	$197,788	$12,014	$4,254,193
Total	**$80,897,809**	**$3,956,244**	**$240,316**	**$85,094,369**

The values shown above include estimated liabilities for monthly ICI benefit payments (Basic Benefits and Supplemental Benefits), and for additional benefits of $75 per month to disabled members whose disability lasts longer than 12 months, to help these members with medical expenses ($75 Add-on). The liability for the $75 add-on benefit only reflects the cost for disabled members who had not yet received the benefit as of December 31, 2023. For members who had already received the $75 add-on benefit, the liability is reflected in the liability for basic benefits.

We estimated liabilities for open claims and loss adjustment expenses using the same valuation assumptions as last year. We estimated liabilities for IBNR claims using updated valuation assumptions for the State ICI plan that were derived from IBNR experience studies performed by Milliman in the fall of 2023. Additional detail on these experience studies and the new valuation assumptions is provided in Milliman's letter to ETF dated December 29, 2023. The new valuation assumptions are also specified in Appendix D of this report.

The State ICI reserve (i.e., the funds available to cover future plan obligations) increased by $9.3 million between December 31, 2022 and December 31, 2023. The reserve earned $14.2 million in investment income in 2023 (8.7% of the beginning reserve balance), which is 190 basis points higher than the 6.8% investment income assumption for the plan. The Group Insurance Board approved a 20% rate reduction for the State ICI plan in 2023 followed by a 10% reduction in 2024 to better align reserve balances with target levels. The State ICI reserve balance is equal to 203% of the actuarial liability as of December 31, 2023, which is higher than the target range of 130% to 140% for the plan, as shown below:

TABLE 1.2
STATE ICI RESERVE BALANCES AND FINANCIAL EXPERIENCE FROM 2021 THROUGH 2023

BALANCE SHEET COMPONENT		2021	2022	2023
A.	**Beginning Reserve Balance**	**$120,036,016**	**$154,290,018**	**$163,125,349**
B.	Closing Adjustments	($7,919)	($1,791)	73,440
C.	Adjusted Beginning Reserve Balance	$120,028,097	$154,288,227	$163,198,789
D.	Premium Contributions	$39,386,893	$21,181,620	$16,853,429
E.	Investment Earnings	$16,242,523	$9,720,823	$14,200,604
F.	Insurance Claims	$18,240,575	$18,834,773	$18,196,162
G.	Administrative Expenses	$3,126,920	$3,230,548	$3,598,064
H.	**Ending Reserve Balance (C + D + E – F – G)**	**$154,290,018**	**$163,125,349**	**$172,458,596**
I.	Actuarial Liability	$88,430,429	$88,310,114	$85,094,369
J.	Surplus (H – I)	$65,859,589	$74,815,235	$87,364,227

Actuarial Valuation

The estimated liabilities for the State ICI plan as of December 31, 2023 consist of the following components:

- **Liability for Open Claims**: Present value of expected benefit payments to disabled members whose disability was both incurred and reported by December 31, 2023. There were 988 open claims and no pending claims as of the valuation date.

- **Liability for Incurred but not Reported (IBNR) Claims**: Present value of expected benefit payments to disabled members whose disability was incurred on or before December 31, 2023, but whose claims had not yet been reported as of that date.

- **Liability for Loss Adjustment Expenses**: Actuarial present value of expected expenses related to the ongoing management and payment of open and IBNR claims.

The following table compares the estimated liabilities for the State ICI plan as of December 31, 2022 and December 31, 2023:

TABLE 2.1
ACTUARIAL LIABILITIES FOR THE STATE ICI PLAN AS OF DECEMBER 31, 2022 AND DECEMBER 31, 2023

LIABILITY COMPONENT	DECEMBER 31, 2022	DECEMBER 31, 2023
Open Claims	$79,398,399	$78,067,082
IBNR Claims	$4,236,602	$2,773,094
Loss Adjustment Expense	$4,675,113	$4,254,193
Total	**$88,310,115**	**$85,094,369**

The total liability for the State ICI plan decreased by 3.6% from $88.3 million as of December 31, 2022 to $85.1 million as of December 31, 2023. The liability for open claims decreased by 1.7% from $79.4 million as of December 31, 2022 to $78.1 million as of December 31, 2023. The number of open claims decreased by 2.0% from 1,008 as of December 31, 2022 to 988 as of December 31, 2023, and the average net benefit amount increased by 3.5% from $1,533 as of December 31, 2022 to $1,587 as of December 31, 2023. Other factors that can impact State ICI liabilities include cause of disability and claimant demographics, because the valuation assumptions vary by these factors. For example, the following table compares State ICI open claims as of December 31, 2022 and December 31, 2023 based on cause of disability:

TABLE 2.2
STATE ICI OPEN CLAIMS AS OF DECEMBER 31, 2022 AND DECEMBER 31, 2023
BY CAUSE OF DISABILITY

CAUSE OF DISABILITY	12/31/2022		12/31/2023	
	Count	Percentage	Count	Percentage
Back	158	16%	153	15%
Cancer	42	4%	40	4%
Circulatory	44	4%	44	4%
Diabetes	8	1%	11	1%
Digestive	18	2%	18	2%
Ill-defined and Misc Conditions	33	3%	36	4%
Injury other than back	47	5%	44	4%
Maternity	3	0%	9	1%
Mental and Nervous	287	28%	283	29%
Nervous System	129	13%	123	12%
No Information	4	0%	1	0%
Other	69	7%	62	6%
Other Musculoskeletal	159	16%	155	16%
Respiratory	7	1%	9	1%
Total	**1,008**	**100%**	**988**	**100%**

Appendix C contains tables that show the distribution of State ICI open claims by age and gender, and by disability year and gender.

The estimated liability for IBNR claims decreased by 34.5% from $4.2 million as of December 31, 2022 to $2.8 million as of December 31, 2023, primarily due to the updated valuation assumptions for IBNR claims. The liability for loss adjustment expenses decreased due to a reduction in the number of open claims, and due to the updated IBNR valuation assumptions.

The liabilities were calculated based on a discount rate of 6.8%, which is the same as last year. The discount rate assumption is prescribed by ETF and we have performed no independent assessment of the reasonableness of this assumption.

The liabilities for open claims, IBNR claims, and loss adjustment expenses are discussed in greater detail below. Appendix D of this report includes additional documentation of the valuation assumptions.

Open Claims

We tested the valuation assumptions by performing retrospective runoff studies using State ICI claim experience from 2018 through 2022. In performing these studies, we first calculated the liability for claims that were open on prior valuation dates using current valuation assumptions, then we determined whether those liabilities would have provided sufficient funding for the emerging claim costs. The emerging claim costs were calculated as the present value of benefit payments made during the study period, plus the present value of the remaining liabilities for claims still open at the end of the study period. The results from our runoff studies are shown below, summarized in terms of average annual margins from five mutually distinct 12-month studies based on State ICI experience from 2018 through 2022.

TABLE 2.3
RUNOFF STUDY FOR THE ICI PLANS BASED ON EXPERIENCE FROM 2018 THROUGH 2022

CLAIM DURATION	AVERAGE ANNUAL MARGIN
1 – 12 months	6.1%
13 – 24 months	1.7%
25 – 36 months	0.8%
37 – 48 months	-1.9%
49 – 60 months	2.1%
61 + months	1.3%
Total	**1.0%**

In the preceding table, a positive average annual margin indicates the estimated liability provided adequate funding for the runoff of open claims during the study period, while a negative result indicates a deficiency. For this type of plan, we typically target a positive overall average annual margin of 1% to 5%, with reasonably consistent patterns by claim duration. Although experience from duration group *37 – 48 months* produces a modest negative margin in our runoff study, the margins corresponding to other duration groups are positive and the overall margin falls within the target range of 1% to 5%. We will continue to monitor State ICI experience and test the valuation assumptions in future years.

IBNR Claims

The liability for IBNR claims represents the present value of expected benefit payments for State ICI claims incurred on or before December 31, 2023 that were unreported as of that date. We have assumed that all IBNR claims were incurred in 2023, and that 17% of claims incurred in 2023 were unreported as of the valuation date. This assumption is based on IBNR experience studies performed by Milliman in the fall of 2023. We also assumed that the total cost of claims incurred in 2023 will be $16.3 million, based on an analysis of State ICI incurred claim costs from 2017 through 2022. The calculation of the liability for IBNR claims is provided below:

TABLE 2.3
IBNR LIABILITY CALCULATION AS OF DECEMBER 31, 2023

A. Estimated Incurred Claims in 2023	$16,312,318
B. Assumed Proportion of Unreported Claims	17.0%
C. IBNR Liability as of December 31, 2023 (A x B)	**$2,773,094**

Loss Adjustment Expenses

The liability for loss adjustment expenses was calculated using the following administrative fees, which were specified by The Hartford in 2020 in its response to the request for proposals for administering the ICI program and were validated based on experience from 2022 and 2023. We assume these fees are applicable in 2024 and beyond. We did not include an inflation assumption for future fees. Although ETF pays The Hartford a flat annual retainer fee as opposed to per-claim fees, we believe the basis below is reasonable (based on the validation results) and appropriate for valuation purposes.

TABLE 2.4
ASSUMED CLAIM ADMINISTRATION FEES

FEE COMPONENT	ASSUMED AMOUNT
One-time new claim fee	$1,488 per new claim
Monthly fee, first two years	$130 per month
Monthly fee, years 3 +	$66 per month

We calculated the liability for loss adjustment expenses separately for open claims and IBNR claims. For open claims, the liability represents the present value of expected claim administration fees, projected using the same claim termination rate assumptions as those used for calculating the open claim liabilities. For IBNR claims, we assumed the one-time new claim fee applies to 170 claims unreported as of the valuation date, based on the average number of new claims per year between 2017 and 2022. We estimated the loss adjustment expense liability for ongoing monthly fees for IBNR claims based on the relationship between the IBNR claim liability to the open claim liability. The estimated loss adjustment expense liabilities as of December 31, 2023 are shown below for State ICI open claims, IBNR claims, and in total.

TABLE 2.5
LIABILITY FOR LOSS ADJUSTMENT EXPENSES AS OF DECEMBER 31, 2023

LIABILITY COMPONENT	ESTIMATED LIABILITY
Open claims	$3,863,448
IBNR claims	$390,745
Total	**$4,254,193**

State ICI Funding Analysis

We performed a funding analysis for the State ICI plan based on the State ICI reserve balance as of December 31, 2023 and a projection of estimated future experience for the plan. The State ICI reserve increased by $9.3 million from $163.1 million as of December 31, 2022 to $172.5 million as of December 31, 2023. This increase was partly driven by the investment income on assets backing reserves. The premium contributions were lower than insurance claims and administrative expenses in 2023. The Board approved a 20% reduction in premium rates effective in 2023 and a 10% reduction in rates in 2024 to better align State ICI reserve balances with target levels. As of December 31, 2023, the State ICI reserve balance is 203% of the actuarial liability, which is higher than the 130% to 140% target range for the plan. Additional details are provided below.

TABLE 3.1
STATE ICI FUNDING ANALYSIS

BALANCE SHEET COMPONENT		2021	2022	2023
A.	**Beginning Reserve Balance**	**$120,036,016**	**$154,290,018**	**$163,125,349**
B.	Closing Adjustments	($7,919)	($1,791)	73,440
C.	Adjusted Beginning Reserve Balance	$120,028,097	$154,288,227	$163,198,789
D.	Premium Contributions	$39,386,893	$21,181,620	$16,853,429
E.	Investment Earnings	$16,242,523	$9,720,823	$14,200,604
F.	Insurance Claims	$18,240,575	$18,834,773	$18,196,162
G.	Administrative Expenses	$3,126,920	$3,230,548	$3,598,064
H.	**Ending Reserve Balance (C + D + E – F – G)**	**$154,290,018**	**$163,125,349**	**$172,458,596**
I.	Actuarial Liability	$88,430,429	$88,310,114	$85,094,369
J.	Surplus (H – I)	$65,859,589	$74,815,235	$87,364,227

We developed financial projections to demonstrate the long-term performance of State ICI reserve under different scenarios. The projections are provided in Appendix A and reflect actual experience for 2023 and projected experience for 2024 and beyond. The key elements of these projections include the following:

- **Beginning Reserve Balance**: The projected beginning reserve balance for each year is equal to the prior year's ending reserve balance.
- **Payroll**: 2023 State ICI payroll was provided by ETF. Future payroll is assumed to increase at a rate of 3.0% per year, which is consistent with the assumptions used by ETF for retirement fund projections.
- **Premium Contributions**: Annual premium contributions are modeled as a percentage of payroll. Although actual premium contributions vary by premium category, the composite rate was 0.473% of payroll in 2023.
- **Investment Income**: Smoothed investment income on assets backing reserves. The annual investment income in 2024 and beyond is projected as 6.8% of the reserve balance at the beginning of the year.

- **Insurance Claims**: Annual insurance claims are the sum of projected payments on existing claims as of December 31, 2023, and payments on expected future claims incurred after December 31, 2023. Insurance claims for 2024 and beyond are equal to 0.54% of payroll based on historical experience from 2017 through 2022, which includes explicit margin of 5%. Benefit payments for these new claims are then computed using runout patterns generated from our valuation assumptions, which in turn are based on recent plan experience.

- **Administrative Expenses**: Administrative expenses are modeled as a constant percentage of paid insurance claims, based on actual values in 2023.

- **Ending Reserve Balance**: The ending reserve balance equals the starting balance, plus premiums, plus investment earnings, less claims, and less expenses.

- **Actuarial Liability**: The actuarial liability is modeled in a similar fashion to the insurance claims. It represents the sum of the decreasing liability on claims that existed as of December 31, 2023 and of the increasing liability for new claims incurred after December 31, 2023.

- **Surplus or Deficit**: The projected surplus or deficit equals the ending reserve balance less the actuarial liability.

- **Fund Ratio**: Ratio of State ICI reserve balance to the actuarial liability. The target fund ratio range for the State ICI plan is 130% to 140% of the actuarial liability.

The financial projections are included in Appendix A, along with a description of the scenarios that were assumed for projecting State ICI experience. Note that the financial projections shown below depend on a variety of actuarial assumptions about future experience, including but not limited to investment earnings, payroll growth, and disability claim experience. It is nearly certain that actual experience will vary from these assumptions, meaning that the plan’s actual surplus or deficit will be higher or lower than the illustrated values.

Appendix A: Financial Projections

We developed financial projections for the State ICI plan based on the following scenarios. In each of the scenarios, we have assumed State ICI benefit enhancements[1] were effective on January 1, 2024.

- **Baseline Scenario**: 2024 contribution rates are held level in future years. In the Baseline scenario, the reserve balance is projected to remain relatively level whereas the liabilities gradually increase over time, resulting in a reduction of the fund ratio from 203% as of December 31, 2023 to 169% as of December 31, 2029.
- **Scenario 1**: Contribution rates are reduced by 10% in 2025 and again in 2026, then held level in future years. The fund ratio is projected to reduce to 154% by December 31, 2029.
- **Scenario 2**: Contribution rates are reduced by 10% in 2025 and again in 2026, then held level in future years, with -15% investment return in 2024. The fund ratio is projected to reduce to 105% by December 31, 2029.
- **Scenario 3**: Contribution rates are reduced by 20% in 2025 and then held level. This reduces the fund ratio to 151% by December 31, 2029.
- **Scenario 4**: Contribution rates are held level in future years, with a -25% investment return in 2024. This reduces the fund ratio to the 135% target as of December 31, 2024, and the projected fund ratio reduces to 98% by 2029.

In order to reduce the surplus balance to target levels in the near term, it would be necessary to set a contribution rate that is not sustainable in the long term, meaning that eventually rate increases would be required. Scenarios 1, 2 and 3 illustrate ways to spend down the surplus faster than the baseline scenario, which could eventually require rate increases once the excess surplus is eliminated.

The projections below assume that future rate decreases (that is after 2024) will have no impact on participation. This assumption is based on historical experience between 2015 – 2019 where total participation rates were largely unaffected by annual 20% rate increases. It is possible, however, that large rate decreases could entice higher participation which in turn could impact claim costs. To the extent rates are not sufficient to cover these costs on their own, those costs could outweigh the additional contributions and reduce the surplus.

[1] These enhancements include extending basic annual covered payroll from $64,000 to $120,000 and eliminating supplemental benefits.

Baseline Scenario: 2024 contribution rates are held level in 2025 and beyond. State ICI benefit enhancements effective on January 1, 2024.

	Actual	Projected -->					
Calendar Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
BOY Reserve Balance	$163,198,789	$172,458,596	$177,236,271	$179,971,671	$181,704,176	$182,494,079	$182,366,009
Premium Contributions	$16,853,429	$16,437,792	$16,966,362	$17,475,353	$17,999,613	$18,539,602	19,095,790
Investment Income	$14,200,604	$11,727,185	$12,052,066	$12,238,074	$12,355,884	$12,409,597	$12,400,889
Total Revenues	$31,054,033	$28,164,977	$29,018,428	$29,713,426	$30,355,497	$30,949,199	$31,496,678
Insurance Claims	$18,196,162	$19,526,233	$21,943,897	$23,361,480	$24,684,535	$25,946,644	$27,071,364
Carrier Administrative Expenses	$2,259,300	$2,424,446	$2,724,632	$2,900,644	$3,064,919	$3,221,627	$3,361,277
Administrative Expense	$1,338,764	$1,436,623	$1,614,500	$1,718,797	$1,816,139	$1,908,998	$1,991,748
Total Operating Expenses	$21,794,226	$23,387,302	$26,283,029	$27,980,921	$29,565,594	$31,077,269	$32,424,389
Net Change in Reserve Balance	$9,259,807	$4,777,675	$2,735,399	$1,732,505	$789,903	($128,070)	($927,710)
EOY Reserve Balance	$172,458,596	$177,236,271	$179,971,671	$181,704,176	$182,494,079	$182,366,009	$181,438,299
Actuarial Liability	$85,094,369	$90,879,737	$94,874,226	$98,427,550	$101,652,435	$104,585,808	$107,367,909
Surplus / (Deficit)	$87,364,227	$86,356,534	$85,097,445	$83,276,625	$80,841,644	$77,780,201	$74,070,390
Fund Ratio	**203%**	**195%**	**190%**	**185%**	**180%**	**174%**	**169%**

Scenario 1: Contribution rates are reduced by 10% in 2025 and again in 2026, then held level in future years. State ICI benefit enhancements effective on January 1, 2024.

	Actual	Projected -->					
Calendar Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
BOY Reserve Balance	$163,198,789	$172,458,596	$177,236,271	$178,699,193	$177,418,048	$174,496,568	$170,302,144
Premium Contributions	$16,853,429	$16,437,792	$15,693,885	$14,548,231	$14,579,687	$15,017,077	15,467,590
Investment Income	$14,200,604	$11,727,185	$12,052,066	$12,151,545	$12,064,427	$11,865,767	$11,580,546
Total Revenues	$31,054,033	$28,164,977	$27,745,951	$26,699,776	$26,644,114	$26,882,844	$27,048,136
Insurance Claims	$18,196,162	$19,526,233	$21,943,897	$23,361,480	$24,684,535	$25,946,644	$27,071,364
Carrier Administrative Expenses	$2,259,300	$2,424,446	$2,724,632	$2,900,644	$3,064,919	$3,221,627	$3,361,277
Administrative Expense	$1,338,764	$1,436,623	$1,614,500	$1,718,797	$1,816,139	$1,908,998	$1,991,748
Total Operating Expenses	$21,794,226	$23,387,302	$26,283,029	$27,980,921	$29,565,594	$31,077,269	$32,424,389
Net Change in Reserve Balance	$9,259,807	$4,777,675	$1,462,922	($1,281,145)	($2,921,480)	($4,194,425)	($5,376,253)
EOY Reserve Balance	$172,458,596	$177,236,271	$178,699,193	$177,418,048	$174,496,568	$170,302,144	$164,925,890
Actuarial Liability	$85,094,369	$90,879,737	$94,874,226	$98,427,550	$101,652,435	$104,585,808	$107,367,909
Surplus / (Deficit)	$87,364,227	$86,356,534	$83,824,967	$78,990,498	$72,844,133	$65,716,336	$57,557,981
Fund Ratio	**203%**	**195%**	**188%**	**180%**	**172%**	**163%**	**154%**

Scenario 2: Contribution rates are reduced by 10% in 2025 and again in 2026, then held level in future years, with -15% investment return in 2024. State ICI benefit enhancements effective on January 1, 2024.

	Actual	Projected -->					
Calendar Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
BOY Reserve Balance	$163,198,789	$172,458,596	$139,640,297	$138,546,693	$134,535,178	$128,697,663	$121,388,913
Premium Contributions	$16,853,429	$16,437,792	$15,693,885	$14,548,231	$14,579,687	$15,017,077	15,467,590
Investment Income	$14,200,604	($25,868,789)	$9,495,540	$9,421,175	$9,148,392	$8,751,441	$8,254,446
Total Revenues	$31,054,033	($9,430,997)	$25,189,425	$23,969,406	$23,728,079	$23,768,519	$23,722,036
Insurance Claims	$18,196,162	$19,526,233	$21,943,897	$23,361,480	$24,684,535	$25,946,644	$27,071,364
Carrier Administrative Expenses	$2,259,300	$2,424,446	$2,724,632	$2,900,644	$3,064,919	$3,221,627	$3,361,277
Administrative Expense	$1,338,764	$1,436,623	$1,614,500	$1,718,797	$1,816,139	$1,908,998	$1,991,748
Total Operating Expenses	$21,794,226	$23,387,302	$26,283,029	$27,980,921	$29,565,594	$31,077,269	$32,424,389
Net Change in Reserve Balance	$9,259,807	($32,818,299)	($1,093,604)	($4,011,515)	($5,837,515)	($7,308,750)	($8,702,353)
EOY Reserve Balance	$172,458,596	$139,640,297	$138,546,693	$134,535,178	$128,697,663	$121,388,913	$112,686,560
Actuarial Liability	$85,094,369	$90,879,737	$94,874,226	$98,427,550	$101,652,435	$104,585,808	$107,367,909
Surplus / (Deficit)	$87,364,227	$48,760,560	$43,672,467	$36,107,628	$27,045,228	$16,803,105	$5,318,651
Fund Ratio	**203%**	**154%**	**146%**	**137%**	**127%**	**116%**	**105%**

Scenario 3: Contribution rates are reduced by 20% in 2025 and then held level. State ICI benefit enhancements effective on January 1, 2024.

	Actual	Projected -->					
Calendar Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
BOY Reserve Balance	$163,198,789	$172,458,596	$177,236,271	$177,426,716	$175,491,094	$172,258,585	$167,726,581
Premium Contributions	$16,853,429	$16,437,792	$14,421,408	$13,980,282	$14,399,691	$14,831,681	15,276,632
Investment Income	$14,200,604	$11,727,185	$12,052,066	$12,065,017	$11,933,394	$11,713,584	$11,405,408
Total Revenues	$31,054,033	$28,164,977	$26,473,474	$26,045,299	$26,333,085	$26,545,265	$26,682,039
Insurance Claims	$18,196,162	$19,526,233	$21,943,897	$23,361,480	$24,684,535	$25,946,644	$27,071,364
Carrier Administrative Expenses	$2,259,300	$2,424,446	$2,724,632	$2,900,644	$3,064,919	$3,221,627	$3,361,277
Administrative Expense	$1,338,764	$1,436,623	$1,614,500	$1,718,797	$1,816,139	$1,908,998	$1,991,748
Total Operating Expenses	$21,794,226	$23,387,302	$26,283,029	$27,980,921	$29,565,594	$31,077,269	$32,424,389
Net Change in Reserve Balance	$9,259,807	$4,777,675	$190,445	($1,935,622)	($3,232,509)	($4,532,004)	($5,742,349)
EOY Reserve Balance	$172,458,596	$177,236,271	$177,426,716	$175,491,094	$172,258,585	$167,726,581	$161,984,232
Actuarial Liability	$85,094,369	$90,879,737	$94,874,226	$98,427,550	$101,652,435	$104,585,808	$107,367,909
Surplus / (Deficit)	$87,364,227	$86,356,534	$82,552,490	$77,063,543	$70,606,150	$63,140,773	$54,616,323
Fund Ratio	**203%**	**195%**	**187%**	**178%**	**169%**	**160%**	**151%**

Scenario 4: Contribution rates are held level in future years, with a -25% investment return in 2024. State ICI benefit enhancements effective on January 1, 2024.

	Actual	Projected -->					
Calendar Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
BOY Reserve Balance	$163,198,789	$172,458,596	$122,394,438	$121,400,592	$119,150,264	$115,686,501	$111,015,516
Premium Contributions	$16,853,429	$16,437,792	$16,966,362	$17,475,353	$17,999,613	$18,539,602	19,095,790
Investment Income	$14,200,604	($43,114,649)	$8,322,822	$8,255,240	$8,102,218	$7,866,682	$7,549,055
Total Revenues	$31,054,033	($26,676,857)	$25,289,184	$25,730,593	$26,101,831	$26,406,284	$26,644,845
Insurance Claims	$18,196,162	$19,526,233	$21,943,897	$23,361,480	$24,684,535	$25,946,644	$27,071,364
Carrier Administrative Expenses	$2,259,300	$2,424,446	$2,724,632	$2,900,644	$3,064,919	$3,221,627	$3,361,277
Administrative Expense	$1,338,764	$1,436,623	$1,614,500	$1,718,797	$1,816,139	$1,908,998	$1,991,748
Total Operating Expenses	$21,794,226	$23,387,302	$26,283,029	$27,980,921	$29,565,594	$31,077,269	$32,424,389
Net Change in Reserve Balance	$9,259,807	($50,064,158)	($993,845)	($2,250,328)	($3,463,763)	($4,670,985)	($5,779,544)
EOY Reserve Balance	$172,458,596	$122,394,438	$121,400,592	$119,150,264	$115,686,501	$111,015,516	$105,235,973
Actuarial Liability	$85,094,369	$90,879,737	$94,874,226	$98,427,550	$101,652,435	$104,585,808	$107,367,909
Surplus / (Deficit)	$87,364,227	$31,514,701	$26,526,366	$20,722,713	$14,034,066	$6,429,709	($2,131,937)
Fund Ratio	**203%**	**135%**	**128%**	**121%**	**114%**	**106%**	**98%**

Appendix B: Plan Description

The State ICI Plan provides short-term and long-term disability benefits as summarized below:

- **Elimination Period**: University of Wisconsin faculty and academic staff select their elimination period up to 180 days. All other state employees have a 30-day elimination period. State ICI participants must use sick leave time up to a maximum of 130 working days before benefits begin.

- **Maximum Benefit Period**: The following table shows the maximum duration of benefits:

TABLE B.1
STATE ICI MAXIMUM BENEFIT PERIOD

AGE AT DISABLEMENT	MAXIMUM BENEFIT PERIOD
On or Before 60th Birthday	To Age 65
After 60th Birthday	5 Years

- **Benefit Amount**: The basic benefit is equal to 75% of average monthly wages up to $4,000 per month (representing $64,000 of annual covered payroll). Supplemental benefits are available to employees whose annual salary exceeds $64,000 and provide an additional benefit up to $3,500 per month (representing $120,000 of annual covered payroll). Effective January 1, 2024, supplemental benefits were removed from the State ICI plan and basic covered payroll was extended to $120,000 of annual wages.

- **Benefit Increases**: None

- **Benefit Offsets**: The ICI plan benefit is offset by income received from other sources including, but not limited to: Social Security benefits (regular or disability), unemployment compensation, Worker's Compensation (except permanent disability awards), WRS benefits (retirement, disability retirement, Long-Term Disability Insurance, or separation), work earnings, and Duty Disability benefits.

- **Definition of Disability**: During the first 12 months of disability, the participant is disabled if unable to perform his or her job and under the care of a physician. After the first 12 months of disability, the participant is disabled if unable to engage in any substantial gainful activity for which he or she is reasonably qualified.

- **Premium Contributions**: Premiums for basic coverage are paid by the employer and the employee. Premiums for supplemental coverage are paid entirely by the employee.

Appendix C: Data for Valuation

This appendix contains demographic summaries for State ICI open claims as of December 31, 2023. There were 988 open claims as of the valuation date. Tables C1 and C2 show the distribution of State ICI open claims by gender and disability year, and by gender and disability age, respectively.

TABLE C1
OPEN AND PENDING OPEN STATE ICI CLAIMS AS OF DECEMBER 31, 2023
BY DISABILITY YEAR AND GENDER

Disability Year	Male	Female	Total
2001 and earlier	10	25	35
2002	2	8	10
2003	2	13	15
2004	6	15	21
2005	7	19	26
2006	9	9	18
2007	7	15	22
2008	8	15	23
2009	10	22	32
2010	10	25	35
2011	13	24	37
2012	12	25	37
2013	20	34	54
2014	18	26	44
2015	9	35	44
2016	15	34	49
2017	16	36	52
2018	13	44	57
2019	10	20	30
2020	22	42	64
2021	18	45	63
2022	32	44	76
2023	42	102	144
Total	**311**	**677**	**988**

TABLE C2
OPEN AND PENDING OPEN STATE ICI CLAIMS AS OF DECEMBER 31, 2023
BY DISABILITY AGE AND GENDER

Disability Age	Male	Female	Total
Under 20	0	0	0
20-24	5	12	17
25-29	12	34	46
30-34	21	54	75
35-39	46	98	144
40-44	47	130	177
45-49	68	111	179
50-54	57	119	176
55-59	40	81	121
60-64	12	35	47
65 or above	3	3	6
Total	**311**	**677**	**988**

Tables C3 and C4 show a distribution of the State ICI net monthly benefit amounts as of December 31, 2023 by year of disability and gender, and by age at disability and gender, respectively.

TABLE C3
STATE ICI NET MONTHLY BENEFIT AMOUNTS AS OF DECEMBER 31, 2023
BY YEAR OF DISABILITY AND GENDER

Disability Year	Male	Female	Total
2001 and earlier	$7,636	$14,000	$21,636
2002	1,619	9,248	10,866
2003	361	12,035	12,396
2004	3,445	12,177	15,623
2005	5,900	16,818	22,718
2006	9,560	5,244	14,804
2007	8,024	16,578	24,602
2008	7,346	12,870	20,217
2009	8,587	25,820	34,408
2010	11,313	30,151	41,464
2011	14,087	18,509	32,596
2012	12,371	27,276	39,647
2013	29,782	38,623	68,405
2014	14,391	33,574	47,966
2015	10,651	35,707	46,358
2016	12,420	42,845	55,265
2017	15,216	54,451	69,667
2018	22,256	59,194	81,450
2019	19,875	27,900	47,776
2020	25,993	71,392	97,384
2021	45,308	83,652	128,960
2022	65,534	104,903	170,437
2023	137,958	325,183	463,142
Total	**$489,635**	**$1,078,152**	**$1,567,787**

TABLE C4
STATE ICI NET MONTHLY BENEFIT AMOUNTS AS OF DECEMBER 31, 2023
BY DISABILITY AGE AND GENDER

Disability Age	Male	Female	Total
Under 20	$0	$0	$0
20-24	8,253	14,938	23,191
25-29	26,423	60,752	87,174
30-34	35,607	96,686	132,293
35-39	70,742	158,432	229,173
40-44	79,990	189,936	269,926
45-49	92,460	183,316	275,776
50-54	64,913	159,555	224,467
55-59	78,169	131,602	209,771
60-64	27,667	77,446	105,113
65 or above	5,413	5,490	10,903
Total	**$489,635**	**$1,078,152**	**$1,567,787**

Appendix D: Actuarial Methods and Assumptions

- **Valuation Date**: December 31, 2023

- **Discount Rate**: 6.8%, specified by ETF. This assumption represents an expected long-term investment return for the State ICI reserve.

- **Claim Termination Rates**: Claim termination rate assumptions were derived from ICI program experience relative to the 2012 Group Long-Term Disability Valuation Table, as shown below:

TABLE D1

CLAIM TERMINATION RATE ADJUSTMENT FACTORS TO 2012 GLTD

DISABILITY DURATION	ADJUSTMENT FACTOR
1 – 12 months	1.20
13 – 24 months	1.60
25 – 36 months	0.85
37 – 48 months	0.40
49 – 60 months	0.25
61 -120 months	0.85
121 + months	1.30

- **Estimated Offset Assumptions**: Estimated Social Security, Other Disability, and Pension/retirement offset assumptions were derived from ICI program experience and are provided below:

TABLE D2

CUMULATIVE SSDI APPROVAL PROBABILITIES

	DURATION AS OF VALUATION DATE (YEARS)							
PROJECTED DURATION (YEARS)	1	2	3	4	5	6	7	8+
1	0%							
2	11%	0%						
3	29%	10%	0%					
4	43%	26%	9%	0%				
5	55%	43%	29%	13%	0%			
6	65%	55%	45%	32%	7%	0%		
7	69%	61%	52%	41%	19%	5%	0%	
8+	71%	63%	54%	44%	24%	11%	0%	0%

TABLE D3

CUMULATIVE OTHER DISABILITY APPROVAL PROBABILITIES

	DURATION AS OF VALUATION DATE (YEARS)							
PROJECTED DURATION (YEARS)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8+**
1	0%							
2	3%	0%						
3	14%	8%	0%					
4	26%	20%	6%	0%				
5	35%	30%	17%	7%	0%			
6	39%	35%	23%	13%	0%	0%		
7	39%	35%	23%	13%	0%	0%	0%	
8+	39%	35%	23%	13%	0%	0%	0%	0%

TABLE D4

CUMULATIVE PENSION/RETIREMENT APPROVAL PROBABILITIES

	DURATION AS OF VALUATION DATE (YEARS)		
PROJECTED DURATION (YEARS)	**1**	**2**	**3+**
1	0%		
2	10%	0%	
3+	21%	0%	0%

We also assumed offset amounts equal to 45% of the gross benefit amount for estimated SSDI benefits, 36% of the gross benefit amount for estimated Pension/Retirement benefits, and 50% of the gross benefit amount for estimated Other Disability benefits.

- **Incurred But Not Reported Claims**: 17% of the estimated incurred claims for the current year, determined from analyses of historical State ICI claim experience.

- **Overpayment Credit**: We assume that 75% of the December 31, 2023 overpayment balance will eventually be recovered, and we applied this amount as an offset to the total liability. This assumption is based on an analysis performed by Milliman in 2022-23 of historical overpayment balances and recoveries using historical plan experience.

- **Loss Adjustment Expenses**: Assumed claim administration fees are provided below:

TABLE D5

ASSUMED ADMINISTRATIVE FEES

FEE COMPONENT	ASSUMED FEES
New claim fee	$1,488 per new claim
Monthly fee, years 1 and 2	$130 per month
Monthly fee, years 3+	$66 per month

Appendix E: Reliance Items

In performing the valuation, we relied, without audit, on certain data and information provided by ETF and The Hartford. To the extent any of the data or other items was incomplete or inaccurate, the results of our work may be materially affected.

The principal items on which we relied included the following:

- Lists of open disability claims and related information provided by The Hartford;
- Reserve balances, premium contributions, plan expenses, covered payroll, and other financial information provided by ETF;
- Plan descriptions provided by ETF; and
- Discussions with ETF and staff at The Hartford.

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