



Wisconsin Department of Employee Trust Funds

Audit of the Actuarial Valuation of the Income Continuation Insurance Plans

Actuarial Audit of the December 31, 2023 Valuation for the State and Local Plans

February 26, 2025/ Robert Burrell/ Ben Kirkland

Agenda

About This Audit

About this Plan and Valuation Results

Plan Benefits

Segal's Methodology

Valuation Methodology

Liability Matching Results

Overall Audit Results

Assumption Review

Key Recommendations

Caveats

About This Audit

Points to note about this audit:

- Milliman performed the annual Income Continuation Insurance (ICI) Plans' actuarial valuations as of December 31, 2023
- Milliman also performed experience studies covering key assumptions used in the valuations
- There is both a State ICI Plan and Local ICI Plan. Both plans were audited, and this presentation summarizes the combined audit results.
- Data was initially provided by the State's Department of Employee Trust Funds (ETF) and supplemented by Milliman
- Segal was tasked to:
 - Replicate the liabilities using the data and assumptions used by Milliman
 - Opine on the assumptions
 - Provide an overall assessment of the report
- Segal's liability results were very close to Milliman's results

About this Plan and Valuation

Under both the State and Local ICI Plans:

- Both short- and long-term disability benefits are offered.
- During the first 12 months of disability, the participant is disabled if they are unable to perform their own job and are 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 they are reasonably qualified.
- Benefit amounts do not increase and are subject to offsets if participants receive benefits from other plans (Social Security, WRS).

State Plan Valuation Results

Under the State plan, there were 988 open claims as of the December 31, 2023 measurement date, with the following liability profile, as reported by Milliman:

Income Continuation Insurance Plan Valuation (State) Summary Results as of December 31, 2023

Description	Value (Millions)
1. Actuarial Liability	\$85.1
2. Assets	<u>172.5</u>
3. Surplus (2 - 1)	\$87.4
4. Funded ratio	202.7%

Local Plan Valuation Results

Under the Local plan, there were 97 open claims as of the December 31, 2023 measurement date, with the following liability profile, as reported by Milliman:

Income Continuation Insurance Plan Valuation (Local) Summary Results as of December 31, 2023

Description	Value (Millions)
1. Actuarial Liability	\$7.52
2. Assets	<u>43.92</u>
3. Surplus (2 - 1)	\$36.40
4. Funded ratio	584.2%

Plan Benefits

Member benefits include the following:

- A gross benefit of 75% of salary up to \$120,000 of covered salary
 - Less actual and assumed benefit offsets, including Social Security payments and retirement benefits, among others.
- Payable until earlier of recovery, death, or age 65 unless disability occurs after age 60, then max of 5 years
 - Recovery and death rates vary primarily by age at disability, disability duration, and cause of disability
- Benefit offsets can potentially come from multiple sources, making developing the projected benefit payment stream complicated.
- Most participants are expected to recover before reaching the maximum benefit duration.

Segal's Methodology

For each plan:

- Collect source data from ETF for claims and asset information.
- Match the participant count reported by Milliman.
- Match the benefits information reported by Milliman.
- Incorporate the valuation assumptions in our calculation model.
- Review the reasonableness of those assumptions.
- Match the assets displayed in the Milliman Valuation to the information received from ETF.
- Match the benefit liabilities (within tolerances) displayed in the valuation report.
- Comment on the overall assumptions, methods, plan provision summaries, and report accuracy.

Valuation Methodology

Liabilities for each plan were developed using the following framework:

- Determine covered participants as of the valuation date
- Estimate the benefit paid at each subsequent month
- Multiply by the probability of payment at each subsequent month through benefit expiration
- Discount the monthly values with interest and sum to determine the liabilities for each participant
 - The discount rate of 6.80% is prescribed by the ETF and was not reviewed as part of the audit

$$\sum_{\substack{\text{all} \\ \text{valued}}} \sum_{t=0}^{\text{exp}} p_x v^t (\text{Gross Benefit}_t - \text{Estimated Offsets}_t)$$

Liability Matching Results

Actuarial Liabilities for the State ICI Plan as of December 31, 2023

Liability Component (\$M)	Milliman Valuation Results	Segal Replication	Ratio of Segal Replication to Milliman Valuation Results
Open Claims	\$78.07	\$78.18	100.1%
IBNR Claims	2.77	2.77	100.0%
Loss Adjustment Expense	4.25	4.27	100.5%
Total	\$85.09	\$85.22	100.2%

These tolerances are within our actuarial professional standards.

Liability Matching Results

Actuarial Liabilities for the Local ICI Plan as of December 31, 2023

Liability Component (\$M)	Milliman Valuation Results	Segal Replication	Ratio of Segal Replication to Milliman Valuation Results
Open Claims	\$6.55	\$6.68	101.9%
IBNR Claims	0.50	0.50	100.0%
Loss Adjustment Expense	0.47	0.47	100.8%
Total	\$7.52	7.65	101.6%

These tolerances are within our actuarial professional standards.

Overall Audit Results

- Overall, we believe that the Milliman Valuation reports accurately reflect the accounting results for the State of Wisconsin's Income Continuation Insurance Plans (State and Local) for the fiscal year ending December 31, 2023.
- Current assumptions result in a close match to recent claims experience. There is more volatility in short-duration claims, which is expected.

Table 2.3 from Milliman's 2023 Valuation: Runoff Study for ICI Plans (2018-2022): Annual Margin as a % of Initial Liability

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%

Assumption Review

Loss Adjustment Expenses (State Plan)

- The liability for loss adjustment expenses is based on the present value of expected future administrative fees for current participants related to the ongoing management of open and IBNR claims.
- The liability as of the December 31, 2023 measurement date is \$4.25 million.
- Based on the expected fees that were provided, together with the current open and IBNR claims, Segal estimated the liability as of December 31, 2023 to be \$4.27 million.
- Milliman appears to be estimating this reserve appropriately, based on GASB 10 guidance.

Assumption Review

Loss Adjustment Expenses (Local Plan)

- The liability for loss adjustment expenses is based on the present value of expected future administrative fees for current participants related to the ongoing management of open and IBNR claims.
- The liability as of the December 31, 2023 measurement date is \$466,000.
- Based on the expected fees that were provided, together with the current open and IBNR claims, Segal estimated the liability as of December 31, 2023 to be \$470,000.
- Milliman appears to be estimating this reserve appropriately, based on GASB 10 guidance.

Assumption Review

Claim Termination Rates

- The claim termination (death and recovery) rates are based on the industry-standard 2012 Group Long-Term Disability Table (GLTD), with adjustments to the rates at various durations based on recent claim experience for the State and Local ICI plans combined (see table below).
- The 2012 GLTD contains death and recovery rates that vary based on age at disability occurrence, the duration of disability as of the measurement date, and the cause of disability (cancer, musculoskeletal, etc.)
- These primary death and recovery rates are further modified by factors related to benefit amount, elimination period length, and the changeover in definition of disability.
- Based on our review, Segal believes that these assumptions are reasonable.

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

Assumption Review

Benefit Offsets

- The most significant benefit assumptions are for the benefit offsets that have not yet been awarded.
- Milliman performed significant analysis in their recent Income Continuation Insurance Experience Study to develop assumptions for future offset applicability and average offset amount.
- This analysis appeared to be robust and thoughtful, and we have no reason to doubt the results.
- This includes developing new offset applicability assumptions that increase from the current valuation date through an ultimate disability duration at a future date.

Cumulative Social Security Disability Approval Probabilities

Projected / Current Duration	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%

Key Recommendations

As a result of our audit, we have the following recommendations:

- Milliman should disclose whether any of the assumptions have a significant bias to underestimation or overestimation, particularly regarding the claim termination/mortality assumption and related adjustment factors.
- Milliman should disclose whether the estimated liability is intended to be a conservative measure, a best estimate, or other measure of results.
- Future reports should consider including projection scenarios that provide sensitivity to demographic assumptions.

Additional discussion is included in our audit reports dated January 31, 2025.

Caveats

- This presentation is intended for the use of the Wisconsin Department of Employee Trust Funds.
- This discussion is a supplement to Segal's full audit reports dated January 31, 2025.
- Please refer to the full report for a description of assumptions and plan provisions reflected in the results shown in this presentation.
- Certain assumptions were not audited by Segal but play a significant role in the determination of the liabilities. It is suggested that the valuation actuary, Milliman, should provide regular detail with regard to the development and accuracy of these assumptions.
- The calculations included in this presentation were completed under the supervision of Robert Burrell, ASA, FCA, MAAA, EA.

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