STATE OF WISCONSIN
Department of Employee Trust Funds
A. John Voelker
SECRETARY

Wisconsin Department
of Employee Trust Funds
PO Box 7931
Madison WI 53707-7931
1-877-533-5020 (toll free)
Fax 608-267-4549
etf.wi.gov

Correspondence Memorandum

Date: April 16, 2021

To: Group Insurance Board

From: Jim Guidry, Director
Benefit Services Bureau
Division of Retirement Services

Subject: Acceptance of State and Local Income Continuation Insurance (ICI) Actuarial Valuations

ETF requests the Group Insurance Board (Board) approve the State ICI Actuarial Valuation as of December 31, 2020. ETF also recommends the Board adopt Scenario 2, which would result in a 50% premium decrease for the 2022 plan year.

ETF requests the Board approve the Local ICI Actuarial Valuation as of December 31, 2020. ETF also recommends the local ICI plan premium holiday remain in effect for the 2022 plan year.

Milliman, Inc. has prepared its annual actuarial valuation of the State and Local ICI programs as of December 31, 2020. The State ICI valuation shows the fund balance has reached 134% of actuarial liabilities, which put the balance one percentage point away from the target of 135%. 2020 was the final year of the Board's long-term plan to eliminate the State ICI program's actuarial deficit, which stood at $32.2 million at the end of 2015 when the plan commenced.

Additionally, the reserve fund ratio in the Local ICI program has declined 7.7%. The reserve fund, however, still exceeds the target ratio of 150%, resulting in a recommendation for a continuation of the premium holiday for that plan. More information on the State and Local ICI plan reserves continues below.

An executive summary is on page six of each report.

State ICI Program

State ICI Targeted Reserve Review. The Board established a reserve policy in November 2019 for the State Income Continuation Insurance (ICI) program and approved a reserve target of 135% of the program's actuarial liabilities. At the end of 2019, the State ICI program's fund balance was $90.3 million and represented 100.2%

Reviewed and approved by Matt Stohr, Administrator, Division of Retirement Services

Matt Stohr Electronically Signed 4/29/21

Board	Mtg Date	Item #
GIB	5.12.21	13

of the program's actuarial liability of $90.1 million. While this was continued improvement in the financial position of the program, the fund balance fell short of the designated target of 135% of program liabilities.

At the end of 2020, the fund balance had increased to $120 million and actuarial liabilities had decreased to $89.5 million (0.6% decrease). The fund balance is now at 134% of liabilities, which is below the target of 135%. The current reserve percentage does fall within the targeted range of 130-140% of plan liabilities established under the ICI Reserve Policy. The ICI Reserve Policy is scheduled for review in 2022.

State ICI Plan Rate Recommendation. The 2020 State ICI valuation report provided by Milliman developed financial projections for four scenarios representing different contribution rate levels:

- Baseline scenario: No change in contribution rates throughout the projection projection period.
- Scenario 1: 25% reduction in contribution rates for the 2022 plan year, then rates are held level in future years.
- Scenario 2: 50% reduction in contribution rates for the 2022 plan year, then rates are held level in future years.
- Scenario 3: 25% reduction in contribution rates in 2022 and 2023, then held level.

ETF recommends the Board adopt Scenario 2 and approve a 50% reduction in premium rates for the State ICI program. A series of 20% premium rate increases from 2016 through 2020 were instituted to address the program's substantial actuarial deficit and pay current claims. Now that the deficit has been erased, the level of premium income can be reduced and would still be expected to meet current claim needs while maintaining the appropriate reserve level.

In hindsight, it would have been possible to reduce rates slightly for 2021. However, at the time (May 2020), there was a considerable doubt about the performance of the financial markets and the Board thought it would be prudent to hold premium rates level as a hedge against market declines. In reality, the State ICI reserve fund earned approximately 12% in investment income in 2020. As a result, Milliman projects the program will end 2021 with a reserve ratio of 152% to actuarial liabilities, well above the target of 135%.

Adopting Scenario 2 would help bring the reserve balance down to the target level. It is the only one of Milliman's scenarios that brings the reserve down to the target specified in the Board's ICI reserve policy during the projection period. Milliman's projection for Scenario 2 will put the fund within the reserve target range (130-140% of liabilities) by the end of 2025. Barring any unforeseen economic factors, only minimal rate changes should be necessary going forward in order to preserve the reserve level and pay ongoing claims.

Scenario 2 can also help bring employees back into the program. The State ICI program has experienced enrollment declines due in part to the rapid increase in premium rates, although these declines were not as severe as anticipated. Scenario 2 would encourage enrollment for those employees who currently feel priced-out of the program.

Local ICI Program

Local ICI Targeted Reserve Review. The Board established a reserve target of 150% of actuarial liabilities for the local ICI program in November 2019. At the end of 2019, the local ICI program's fund balance was $39.6 million and liabilities were $5.9 million, leaving the fund balance at 663% of liabilities. On December 31, 2020, the fund balance had increased to $41.6 million (5% increase) while liabilities increased to $6.8 million (13.9% increase). The fund reserve ratio declined to 612% of plan liabilities (7.7% decrease). In May 2020, the Board discussed ways to reduce the fund balance in the Local ICI program. At the time, it was noted that the reserve ratio was declining from previous levels due to increased participation and claims costs. These results continue that trend although, as Milliman indicates, it will be several years before the ratio approaches the target.

Local ICI Plan Rate Recommendation. The 2020 Local ICI valuation provides financial projections for the following scenario:

- Baseline: Continuation of the local ICI premium holiday for plan year 2022

ETF recommends the Board approve the baseline scenario that leaves the local ICI premium holiday in place.

ICI Update

ETF and Milliman recommended design changes to the State ICI program that addressed declining enrollment, attempted to lower premiums, reduced the actuarial liability, and reduced the complexity and administrative burdens of the program. ETF proposed a redesign proposal in its budget request submitted to the Governor's office in late 2020. The proposal was reduced from ETF's original redesign package for the ICI program due to feedback received from the legislature and the Governor's office.

ETF proposed decoupling sick leave from the state ICI program and also moving oversight of the program to the ETF Board. The ETF Board has oversight authority for ETF's other three disability programs, although some authority is extended to the Wisconsin Retirement and Teachers Retirement Boards as well. Unfortunately, the Governor's office declined to include the sick leave changes in the budget presented to the legislature in February. The change in oversight authority was included in the Governor's budget.

In November 2020, the Board approved issuing a new contract with The Hartford, the current ICI program administrator. At the time this memo was prepared, only three issues remained to be worked out between ETF and The Hartford.

Staff from ETF and Milliman will be at the Board meeting to answer any questions.

Attachment A: State ICI Actuarial Valuation
Attachment B: Local ICI Actuarial Valuation

Actuarial Valuation of
The State Income Continuation Insurance Plan

As of December 31, 2020

For The State of Wisconsin
Department of Employee Trust Funds

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

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

April 14, 2021

Table of Contents

121 Middle Street, Suite 401
Portland, ME 04101-4156
USA

Tel +1 207 772 0046
Fax +1 207 772 7512

milliman.com

April 14, 2021

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, 2020

Dear Jim:

Thank you for asking Milliman to perform an actuarial valuation of the State Income Continuation Insurance Plan (ICI) as of December 31, 2020. The valuation results are provided in this report, along with documentation of our calculation methods and assumptions.

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 which require the use of pension accounting methods, including the calculation of a liability for active lives. We have therefore performed this valuation according to the requirements of GASB 10 ("Accounting and Reporting for Risk Financing and Related Insurance Issues"), which does 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 plans.

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, including historical claim and expense data from The Hartford and ETF. 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.

The discount rate used for this valuation was prescribed by ETF and is specified in this report. 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 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 cost 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, 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,

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

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

Section I: Introduction and Executive Summary

The actuarial liabilities for the State ICI plan as of December 31, 2020 are summarized in Table 1.1 below:

Table 1.1 Actuarial Liabilities for the State ICI Plan as of December 31, 2020				
Liability Component	Standard Benefit	Supplemental Benefit	$75 Add-on	Total Liability Amount
Open Claims	$77,470,025	$2,350,343	$280,011	$80,100,379
IBNR Claims	$4,204,274	$127,552	$15,196	$4,347,022
Loss Adjustment Expense	$4,906,852	$148,868	$17,736	$5,073,456
Total	**$86,581,151**	**$2,626,763**	**$312,943**	**$89,520,857**

The values shown above include estimated liabilities for monthly ICI benefit payments (Standard 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, 2020. For members who had already received the $75 Add-on benefit, the liability is reflected in the Standard Benefit.

We have analyzed the funding status of the State ICI plan as of December 31, 2020. In total, the State ICI reserve (i.e., the fund balance available to cover future plan obligations) increased by $29.7 million from December 31, 2019 to December 31, 2020. This increase was due to a combination of strong investment income in 2020 and the fact that premium contributions exceeded claims and expenses in 2020. The State ICI reserve balance is now equal to 134% of the actuarial liability, which is very close to the reserve target of 135% established by the Board for this plan. Table 1.2 provides details of the State ICI funding status as of December 31, 2018, 2019, and 2020. State ICI fund levels are discussed in greater detail in Section III of this report.

Table 1.2 State ICI Funding Analysis			
Balance Sheet Component	Valuation Date		
	December 31, 2018	December 31, 2019	December 31, 2020
Beginning Balance	$60,974,320	$71,493,483	$90,324,629
Closing Adjustments	51,615	99,718	(12,720)
Adjusted Beginning Balance	61,025,935	71,593,200	90,311,909
Plus: Premium Contributions	28,393,397	33,198,198	39,574,554
Plus: Investment Earnings (Smoothed)	3,172,205	5,888,157	10,631,235
Less: Insurance Claims	18,387,227	17,771,251	17,755,981
Less: Administrative Expenses	2,710,827	2,583,677	2,725,701
Ending Balance	71,493,483	90,324,629	120,036,016
Actuarial Liability	90,549,241	90,091,957	89,520,857
Surplus / (Deficit)	($19,055,758)	$232,672	$30,515,159

Section II: Actuarial Valuation

The actuarial liabilities for the State ICI Plan consist of three components:

- Liability for Open Claims: The present value of expected future benefits payable to members disabled prior to December 31, 2020, whose claims had been reported to ETF on or before that date. There were 1,113 open claims and three pending open claims reported as of the valuation date. We have assumed that the three pending open claims will become open claims after satisfying the elimination period.

- Liability for Incurred but not Reported (IBNR) Claims: The present value of expected future benefits payable to members disabled prior to December 31, 2020, but whose claims had not yet been reported to ETF as of that date.

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

The following table compares the liabilities for the State ICI plan as of December 31, 2019 and December 31, 2020:

Table 2.1
Current Year and Prior Year Liabilities for the State ICI Plan

Component	December 31, 2019	December 31, 2020
Open Claims	$81,180,573	$80,100,379
IBNR Claims	$4,832,244	$4,347,022
Loss Adjustment Expense	$4,079,139	$5,073,456
Total	**$90,091,957**	**$89,520,857**

The total liability decreased by 0.6% from $90.1 million on December 31, 2019 to $89.5 million as of December 31, 2020.

The liability for open claims decreased by 1.3% from $81.2 million on December 31, 2019 to $80.1 million as of December 31, 2020. The number of open claims decreased by 2.1% from 1,140 as of December 31, 2019 to 1,116 as of December 31, 2020, and the average net benefit amount increased by 1.9% from $1,420 as of December 31, 2019 to $1,446 as of December 31, 2020.

The reduction in the liability for IBNR claims was driven by improvements in incurred claims experience observed in recent years.

The increase in the loss adjustment expense liability was primarily driven by a change in the administrative expense assumptions.

The December 31, 2020 liabilities are discussed in greater detail below, and Appendix D of this report includes additional documentation of the assumptions used in our analysis.

Open Claims

The liability for open claims was calculated using the same claim termination rate assumptions as last year. These claim termination rate assumptions are based on the 2012 Group Long-Term Disability Valuation Table adjusted for State ICI plan experience. The adjustment factors were developed from experience studies performed by Milliman using ICI claim experience from 2014 through 2019, and are provided in Appendix D. The estimated offset assumptions are also the same as last year and are based on results from an experience study performed by Milliman using plan experience from 2016 through 2019. The estimated offset assumptions are provided in Appendix D. Finally, a 7.0% discount rate was used to compute the liability for open claims. This discount rate was prescribed by ETF and we have performed no independent assessment of the reasonableness of this assumption.

We tested these assumptions, other than the discount rate, by performing retrospective runoff studies using State ICI claim experience from 2016 through 2020. In performing these studies, we first calculated the liability for claims that were open on prior valuation dates using the current valuation assumptions, then we determined whether those liabilities would have provided sufficient funding for the emerging costs for these claims. 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 liability for claims still open at the end of the study period. The results from the runoff studies are shown below, summarized as the combined result from five mutually distinct 12-month studies using ICI experience from 2016 through 2020.

Table 2.3
Runout Study for the ICI Plans
Study Period: 2016 – 2020

Claim Duration	Average Annual Margin
1 – 12 months	1.1%
13 – 24 months	10.1%
25 – 36 months	3.6%
37 – 48 months	2.7%
49 – 60 months	1.2%
61 + months	2.3%
Total	**2.5%**

In the preceding table, a positive average annual margin indicates the estimated liability would have provided adequate funding for the runout of open claims during the study period, while a negative average annual margin 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. The results in the preceding table show that the State

ICI plan meets our overall objective, although there is some variation by claim duration. The 10.1% average annual margin in durations 13 – 24 months may be due to the change in the State ICI definition of disability from short-term disability to long-term disability after 12 months. It is not uncommon to see a spike in claim termination rates when the definition of disability changes from an STD to an LTD definition because some STD claims may not qualify for LTD benefits. This dynamic can result in greater margins within durations corresponding to the change in definition of disability, if actual claim terminations are greater than expected.

The State ICI Plan provides an additional benefit of $75 per month to disabled employees whose disability lasts longer than 12 months, to help these employees with medical costs. The $75 monthly benefit is already included in the reported benefit amounts of employees disabled for 12 months or longer as of the valuation date. Therefore, the additional liability for these claims is already included in the open claim liability estimate. For employees who were disabled for fewer than 12 months as of the valuation date, the additional liability was determined using the same methods and assumptions described above. We estimated a liability equal to $312,943 as of December 31, 2020 for these claims.

IBNR Claims

The liability for IBNR claims represents the expected cost of claims incurred prior to December 31, 2020 that were unreported as of that date. For example, if, on average, claims are reported 6 months after the date of disability, then the IBNR liability would be approximately 50% of the expected total cost of new claims for the year.

We have assumed that 25% of claims incurred in 2020 were unreported as of December 31, 2020. This is the same assumption as last year and was determined from an analysis performed by Milliman of the percentage of unreported claims at year end, using State ICI claim experience from 2015 through 2019. We also assumed that the total cost of claims incurred in 2020 is $17.4 million, based on an analysis of State ICI incurred claim costs from 2015 through 2019. The December 31, 2020 liability for IBNR claims was then determined from these assumptions as shown below:

Table 2.4 IBNR Liability Calculation As of December 31, 2020	
A. Estimated Incurred Claims in 2020	$17,388,089
B. Assumed Proportion of Unreported Claims	25.0%
C. IBNR Liability as of December 31, 2020 (A x B)	$4,347,022

Loss Adjustment Expenses

The December 31, 2020 liability for loss adjustment expenses was calculated using the per claim per month fees specified by The Hartford in its response to the 2020 request for proposals for administering the ICI program. These assumptions are different than the assumptions used last year, and are provided below in Table 2.5. We have included last year's assumptions in Table 2.5 for comparison.

Table 2.5 Assumed Claim Administration Fees		
Component	12/31/2019 Assumption	12/31/2020 Assumption
One-time new claim fee	$600 per new claim	$1,488 per new claim
Monthly fee, first two years	$145 per month	$130 per month
Monthly fee, years 3 +	$50 per month	$66 per month

We calculated the loss adjustment expense liability for open claims as the present value of expected future administration fees using the same claim termination rate assumptions that we used to calculate the open claim liability. We performed a similar calculation for IBNR claims by assuming 296 claims were incurred but not reported as of December 31, 2020 for which we have assumed the one-time new claim fee applies and had not yet been paid as of the valuation date. The following table provides details of the liability calculation for loss adjustment expenses as of December 31, 2020.

Table 2.6 Liability for Loss Adjustment Expenses	
Claim Type	Estimated Liability
Open claims	$ 4,632,412
IBNR claims	$441,043
Total	$5,073,456

This approach is similar to the approach we used last year for computing the loss adjustment expense liability, but we adjusted the fee schedule to reflect the per claim per month fees reported by The Hartford in 2020.

Section III: Discussion of State ICI Funding Levels

The December 31, 2020 actuarial valuation of the State ICI plan includes an analysis of current and future funding levels. The following table shows the fund balances as of the three most recent fiscal year-ends:

Table 3.1
State ICI Fund Balances

Balance Sheet Component	Valuation Date		
	December 31, 2018	December 31, 2019	December 31, 2020
Beginning Balance	$60,974,320	$71,493,483	$90,324,629
Closing Adjustments	51,615	99,718	(12,720)
Adjusted Beginning Balance	61,025,935	71,593,200	90,311,909
Plus: Premium Contributions	28,393,397	33,198,198	39,574,554
Plus: Investment Earnings (Smoothed)	3,172,205	5,888,157	10,631,235
Less: Insurance Claims	18,387,227	17,771,251	17,755,981
Less: Administrative Expenses	2,710,827	2,583,677	2,725,701
Ending Balance	71,493,483	90,324,629	120,036,016
Actuarial Liability	90,549,241	90,091,957	89,520,857
Surplus / (Deficit)	($19,055,758)	$232,672	$30,515,159

The December 31, 2020 reserve balance is equal to 134% of the actuarial liability, which is very close to the reserve target of 135% established by the Board for the State ICI plan. Reserve balances have grown significantly over the past several years, in part, because the Board approved a series of 20% annual rate increases from 2015 through 2020. These rate increases have helped return the plan to a positive financial position and approach target reserve levels. The rate increases ended in 2020 and no further rate actions have applied, meaning that 2021 contribution rates are the same as 2020.

We have prepared financial projections to demonstrate the long-term performance of the State ICI fund under different contribution scenarios. The projections are provided in Appendix A of this report and reflect actual results for 2020 and expected values in 2021 and beyond. The key elements of the financial projections include the following:

- Beginning Balance: The projected beginning balance for each year is equal to the prior year's ending balance.

- Payroll: 2020 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: Premiums are modeled as a percentage of payroll. In the Baseline Scenario, the premium rate for 2020 and beyond is 1.25% of payroll.

- Investment Income: Investment income reflects an interest rate assumption of 7.0% throughout the projection period, specified by ETF.

- Insurance Claims: Annual insurance claims are the sum of projected payments on existing claims as of December 31, 2020, and payments on expected future claims incurred after December 31, 2020. Insurance claims for 2021 and beyond are based on historical experience of 0.58% of payroll, increased by 10% to add margin, and adjusted for expected aging in future years. 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 2020.

- Ending Balance: The ending 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, 2020 and of the increasing liability for claims incurred after December 31, 2020.

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

Financial projections were developed for the following scenarios:

- The **Baseline** scenario assumes that current contribution rates are held level in all years.

- **Scenario 1** assumes a 25% reduction in contribution rates in 2022, then rates are held level in future years.

- **Scenario 2** assumes a 50% reduction in contribution rates in 2022, then rates are held level in future years.

- **Scenario 3** assumes a 25% reduction in contribution rates in 2022 and 2023, then rates are held level in future years.

In 2019, the Board approved a reserve target of 135% of the actuarial liability for the State ICI plan. Based on our financial projections, the plan is expected to reach this target by the end of 2021 in the Baseline Scenario.

Please note that these projections 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

1. **Baseline Scenario**: Current contribution rates are held level in all years.

2. **Scenario 1**: 25% reduction in contribution rates in 2022, then rates are held level in future years.

3. **Scenario 2**: 50% reduction in contribution rates in 2022, then rates are held level in future years.

4. **Scenario 3**: 25% reduction in contribution rates in 2022 and 2023, then rates are held level in future years.

State ICI Funding Analysis as of December 31, 2020
Baseline Scenario
No change in contribution rates throughout the projection

Calendar Year	2020	2021	2022	2023	2024	2025	2026	2027
BOY Fund Balance	$90,311,909	$120,036,016	$147,669,632	$177,411,440	$208,304,532	$240,592,746	$274,614,659	$310,504,854
Premium Contributions	$39,574,554	$40,761,791	$41,984,644	$43,244,184	$44,541,509	$45,877,754	$47,254,087	$48,671,710
Investment Income	$10,631,235	$8,402,521	$10,336,874	$12,418,801	$14,581,317	$16,841,492	$19,223,026	$21,735,340
Total Revenues	$50,205,789	$49,164,312	$52,321,519	$55,662,984	$59,122,826	$62,719,247	$66,477,113	$70,407,049
Insurance Claims	$17,755,981	$18,665,392	$19,574,804	$21,473,517	$23,263,464	$24,878,294	$26,516,413	$28,217,298
Carrier Administrative Expenses	$1,959,773	$2,060,147	$2,160,521	$2,370,087	$2,567,648	$2,745,881	$2,926,684	$3,114,415
Administrative Expense	$765,928	$805,157	$844,385	$926,289	$1,003,501	$1,073,159	$1,143,821	$1,217,191
Total Operating Expenses	$20,481,682	$21,530,696	$22,579,710	$24,769,892	$26,834,612	$28,697,334	$30,586,918	$32,548,904
Net Change in Fund Balance	$29,724,107	$27,633,616	$29,741,808	$30,893,092	$32,288,214	$34,021,913	$35,890,195	$37,858,146
EOY Fund Balance	$120,036,016	$147,669,632	$177,411,440	$208,304,532	$240,592,746	$274,614,659	$310,504,854	$348,362,999
Actuarial Liability	$89,520,857	$97,012,419	$105,801,819	$113,947,692	$121,781,690	$129,526,909	$137,204,572	$144,799,622
Surplus / (Deficit)	$30,515,159	$50,657,213	$71,609,620	$94,356,839	$118,811,055	$145,087,750	$173,300,282	$203,563,377
Ratio of EOY Fund Balance to Liability	**134%**	**152%**	**168%**	**183%**	**198%**	**212%**	**226%**	**241%**

State ICI Funding Analysis as of December 31, 2020
Scenario 1
25% reduction in contribution rates in 2022

Calendar Year	2020	2021	2022	2023	2024	2025	2026	2027
BOY Fund Balance	$90,311,909	$120,036,016	$147,669,632	$166,915,279	$186,262,593	$205,872,495	$225,994,551	$246,667,817
Premium Contributions	$39,574,554	$40,761,791	$31,488,483	$32,433,138	$33,406,132	$34,408,316	$35,440,565	$36,503,782
Investment Income	$10,631,235	$8,402,521	$10,336,874	$11,684,069	$13,038,382	$14,411,075	$15,819,619	$17,266,747
Total Revenues	$50,205,789	$49,164,312	$41,825,357	$44,117,207	$46,444,513	$48,819,390	$51,260,184	$53,770,529
Insurance Claims	$17,755,981	$18,665,392	$19,574,804	$21,473,517	$23,263,464	$24,878,294	$26,516,413	$28,217,298
Carrier Administrative Expenses	$1,959,773	$2,060,147	$2,160,521	$2,370,087	$2,567,648	$2,745,881	$2,926,684	$3,114,415
Administrative Expense	$765,928	$805,157	$844,385	$926,289	$1,003,501	$1,073,159	$1,143,821	$1,217,191
Total Operating Expenses	$20,481,682	$21,530,696	$22,579,710	$24,769,892	$26,834,612	$28,697,334	$30,586,918	$32,548,904
Net Change in Fund Balance	$29,724,107	$27,633,616	$19,245,647	$19,347,315	$19,609,901	$20,122,057	$20,673,266	$21,221,626
EOY Fund Balance	$120,036,016	$147,669,632	$166,915,279	$186,262,593	$205,872,495	$225,994,551	$246,667,817	$267,889,442
Actuarial Liability	$89,520,857	$97,012,419	$105,801,819	$113,947,692	$121,781,690	$129,526,909	$137,204,572	$144,799,622
Surplus / (Deficit)	$30,515,159	$50,657,213	$61,113,459	$72,314,901	$84,090,804	$96,467,642	$109,463,245	$123,089,820
Ratio of EOY Fund Balance to Liability	**134%**	**152%**	**158%**	**163%**	**169%**	**174%**	**180%**	**185%**

State ICI Funding Analysis as of December 31, 2020
Scenario 2
50% reduction in contribution rates in 2022

Calendar Year	2020	2021	2022	2023	2024	2025	2026	2027
BOY Fund Balance	$90,311,909	$120,036,016	$147,669,632	$156,419,117	$164,220,655	$171,152,243	$177,374,444	$182,830,780
Premium Contributions	$39,574,554	$40,761,791	$20,992,322	$21,622,092	$22,270,755	$22,938,877	$23,627,044	$24,335,855
Investment Income	$10,631,235	$8,402,521	$10,336,874	$10,949,338	$11,495,446	$11,980,657	$12,416,211	$12,798,155
Total Revenues	$50,205,789	$49,164,312	$31,329,196	$32,571,430	$33,766,200	$34,919,534	$36,043,255	$37,134,009
Insurance Claims	$17,755,981	$18,665,392	$19,574,804	$21,473,517	$23,263,464	$24,878,294	$26,516,413	$28,217,298
Carrier Administrative Expenses	$1,959,773	$2,060,147	$2,160,521	$2,370,087	$2,567,648	$2,745,881	$2,926,684	$3,114,415
Administrative Expense	$765,928	$805,157	$844,385	$926,289	$1,003,501	$1,073,159	$1,143,821	$1,217,191
Total Operating Expenses	$20,481,682	$21,530,696	$22,579,710	$24,769,892	$26,834,612	$28,697,334	$30,586,918	$32,548,904
Net Change in Fund Balance	$29,724,107	$27,633,616	$8,749,486	$7,801,538	$6,931,588	$6,222,200	$5,456,337	$4,585,106
EOY Fund Balance	$120,036,016	$147,669,632	$156,419,117	$164,220,655	$171,152,243	$177,374,444	$182,830,780	$187,415,886
Actuarial Liability	$89,520,857	$97,012,419	$105,801,819	$113,947,692	$121,781,690	$129,526,909	$137,204,572	$144,799,622
Surplus / (Deficit)	$30,515,159	$50,657,213	$50,617,298	$50,272,963	$49,370,553	$47,847,535	$45,626,208	$42,616,264
Ratio of EOY Fund Balance to Liability	**134%**	**152%**	**148%**	**144%**	**141%**	**137%**	**133%**	**129%**

State ICI Funding Analysis as of December 31, 2020
Scenario 3
25% reduction in contribution rates in 2022 and 2023, then held level

Calendar Year	2020	2021	2022	2023	2024	2025	2026	2027
BOY Fund Balance	$90,311,909	$120,036,016	$147,669,632	$166,915,279	$178,154,309	$188,845,097	$199,173,157	$209,108,784
Premium Contributions	$39,574,554	$40,761,791	$31,488,483	$24,324,853	$25,054,599	$25,806,237	$26,580,424	$27,377,837
Investment Income	$10,631,235	$8,402,521	$10,336,874	$11,684,069	$12,470,802	$13,219,157	$13,942,121	$14,637,615
Total Revenues	$50,205,789	$49,164,312	$41,825,357	$36,008,923	$37,525,401	$39,025,394	$40,522,545	$42,015,452
Insurance Claims	$17,755,981	$18,665,392	$19,574,804	$21,473,517	$23,263,464	$24,878,294	$26,516,413	$28,217,298
Carrier Administrative Expenses	$1,959,773	$2,060,147	$2,160,521	$2,370,087	$2,567,648	$2,745,881	$2,926,684	$3,114,415
Administrative Expense	$765,928	$805,157	$844,385	$926,289	$1,003,501	$1,073,159	$1,143,821	$1,217,191
Total Operating Expenses	$20,481,682	$21,530,696	$22,579,710	$24,769,892	$26,834,612	$28,697,334	$30,586,918	$32,548,904
Net Change in Fund Balance	$29,724,107	$27,633,616	$19,245,647	$11,239,030	$10,690,788	$10,328,060	$9,935,627	$9,466,548
EOY Fund Balance	$120,036,016	$147,669,632	$166,915,279	$178,154,309	$188,845,097	$199,173,157	$209,108,784	$218,575,332
Actuarial Liability	$89,520,857	$97,012,419	$105,801,819	$113,947,692	$121,781,690	$129,526,909	$137,204,572	$144,799,622
Surplus / (Deficit)	$30,515,159	$50,657,213	$61,113,459	$64,206,616	$67,063,407	$69,646,248	$71,904,212	$73,775,709
Ratio of EOY Fund Balance to Liability	**134%**	**152%**	**158%**	**156%**	**155%**	**154%**	**152%**	**151%**

Appendix B: Plan Description

The State ICI Plan provides short 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:

Age at Disablement	Maximum Benefit Period
Before age 62	To Age 65
62	3.50 years
63	3.00 years
64	2.50 years
65	2.00 years
66	1.75 years
67	1.50 years
68	1.25 years
69	To Age 70

- Benefit Amount: The Standard benefit provides up to 75% of a participant's average monthly earnings, capped at $4,000 per month. Supplemental Coverage is available to employees whose annual salary exceeds $64,000, and provides an additional benefit up to $3,500 per month.

- 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 Standard Coverage are paid by the employer and the employee. Premiums for Supplemental Coverage are paid entirely by the employee.

Appendix C: Data for Valuation

The following tables show a distribution of open claims as of December 31, 2020 by year of disability and gender, and by age at disability and gender.

Number of Open State ICI Claims as of December 31, 2020 By Year of Disability and Gender			
Disability Year	Male	Female	Total
2001 and earlier	16	54	70
2002	3	10	13
2003	2	17	19
2004	8	18	26
2005	8	24	32
2006	14	17	31
2007	10	20	30
2008	12	24	36
2009	11	25	36
2010	12	31	43
2011	13	32	45
2012	19	36	55
2013	23	43	66
2014	21	33	54
2015	14	42	56
2016	21	39	60
2017	23	54	77
2018	27	69	96
2019	23	45	68
2020	67	136	203
Total	347	769	1,116

Number of Open State ICI Claims as of December 31, 2020 By Age at Disability and Gender			
Age at Disability	Male	Female	Total
< 20	0	0	0
20-24	6	18	24
25-29	9	37	46
30-34	24	59	83
35-39	42	121	163
40-44	53	144	197
45-49	74	127	201
50-54	67	138	205
55-59	49	81	130
60-64	22	41	63
65+	1	3	4
Total	347	769	1,116

The following tables show a distribution of net monthly benefit amounts as of December 31, 2020 by year of disability and gender, and by age at disability and gender.

State ICI Net Monthly Benefit Amounts as of December 31, 2020 By Year of Disability and Gender			
Disability Year	Male	Female	Total
2001 and earlier	$11,786	$37,655	$49,441
2002	2,775	10,617	13,392
2003	361	13,346	13,707
2004	5,316	15,597	20,913
2005	6,805	23,217	30,022
2006	12,660	11,006	23,667
2007	10,452	19,789	30,241
2008	9,971	19,485	29,456
2009	8,801	26,875	35,676
2010	13,589	33,325	46,914
2011	14,087	24,248	38,334
2012	13,774	40,306	54,080
2013	36,091	47,269	83,360
2014	15,182	41,214	56,396
2015	16,019	49,935	65,954
2016	20,480	47,404	67,884
2017	26,888	81,813	108,701
2018	40,703	98,202	138,904
2019	48,060	80,554	128,614
2020	201,233	376,687	577,920
Total	$515,032	$1,098,545	$1,613,576

State ICI Net Monthly Benefit Amounts as of December 31, 2020 By Age at Disability and Gender			
Age at Disability	Male	Female	Total
< 20	$0	$0	$0
20-24	8,648	28,374	37,022
25-29	16,099	60,977	77,076
30-34	39,988	96,175	136,163
35-39	62,787	184,017	246,803
40-44	78,969	182,624	261,593
45-49	96,536	158,112	254,648
50-54	86,630	199,152	285,782
55-59	87,082	104,503	191,585
60-64	34,479	79,549	114,028
65+	3,813	5,063	8,875
Total	$515,032	$1,098,545	$1,613,576

Appendix D: Actuarial Methods and Assumptions

- Valuation Date: December 31, 2020

- Discount Rate: 7.0%, specified by ETF. This assumption represents a long-term investment return for the State ICI reserve.

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

Disability Duration	2012 GLTD Termination Rate Adjustment Factor
1 – 9 months	1.25
10 – 12 months	2.50
13 – 24 months	1.25
25 – 60 months	0.98
61 + months	0.96

- Future Offset Approval Rates: Estimated Social Security offset assumptions were derived from State ICI plan experience as shown below.

  Probability of being approved for Social Security benefits (if not already approved):

Claim Duration	Probability
1 – 12 months	67%
13 – 24 months	58%
25 – 36 months	45%
37 – 48 months	35%
49 – 60 months	9%
61 + months	0%

  No future offsets are assumed on claimants disabled more than five years.

  Future Social Security offset amount as percentage of gross benefit amount: 45%.

- Incurred But Not Reported Claims: 25% of the estimated incurred claims for the current year, as determined from analyses of historical State ICI claims experience.

- Overpayment Credit: 75% of the overpayment balance reported by ETF as of December 31, 2020. We assume that 75% of the December 31, 2020 overpayment balance will eventually be recovered, and we applied this amount as an offset to the total liability. This assumption was based on an analysis of historical overpayment balances and recoveries from December 31, 2012 through December 31, 2016.

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

Assumed Claim Administration Fees	
Component	Fee
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

- Asset balances, premium contributions, plan expenses, covered payroll, and other financial information provided by ETF

- Plan descriptions provided by ETF

- Discussions with ETF and personnel at The Hartford

Actuarial Valuation of
The Local Income Continuation Insurance Plan

As of December 31, 2020

For The State of Wisconsin
Department of Employee Trust Funds

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

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

April 16, 2021

Table of Contents

Appendices:

121 Middle Street, Suite 401
Portland, ME 04101-4156
USA

Tel +1 207 772 0046
Fax +1 207 772 7512

milliman.com

April 16, 2021

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

RE: Actuarial Valuation of Local Income Continuation Insurance Plan as of December 31, 2020

Dear Jim:

Thank you for asking Milliman to perform an actuarial valuation of the Local Income Continuation Insurance Plan (ICI) as of December 31, 2020. The valuation results are provided in this report, along with detailed documentation of our valuation methods and assumptions.

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

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, including historical claim and expense data from The Hartford and ETF. 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.

The discount rate used for this valuation was prescribed by ETF and is specified in this report. 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 analysis is only an estimate of the 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 Plan 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 cost 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, 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,

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

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

Section I: Introduction and Executive Summary

The actuarial liabilities for the Local ICI plan as of December 31, 2020 are summarized in Table 1.1 below:

Table 1.1
Actuarial Liabilities for Local ICI Plan
As of December 31, 2020

Liability Component	Standard Benefit	Supplemental Benefit	$75 Add-on	Total Liability Amount
Open Claims	$5,769,134	$214,808	$35,925	$6,019,867
IBNR Claims	$373,361	$13,902	$2,325	$389,587
Loss Adjustment Expense	$372,339	$13,864	$2,319	$388,521
Total	**$6,514,833**	**$242,573**	**$40,568**	**$6,797,975**

The values shown above include estimated liabilities for monthly ICI benefit payments (Standard 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). Please note that 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, 2020. For members who had already received the $75 Add-on benefit, the liability is reflected in the Standard Benefit.

We have analyzed the funding status of the Local ICI plan as of December 31, 2020. In total, the Local ICI reserve (i.e., the fund balance available to cover future plan obligations) increased by $2.0 million from December 31, 2019 to December 31, 2020. This increase represents the difference between investment income in 2020 and claim costs in 2020 (i.e., benefits and expenses). There were no premium contributions in 2020 because premiums for the Local ICI plan have been waived since 2012. The Local ICI reserve is equal to 612% of the actuarial liability as of December 31, 2020, which is significantly higher than the reserve target of 150% established by the Board for this plan.

Table 1.2 below provides details of the Local ICI funding status as of December 31, 2018, 2019, and 2020. Our projection of future funding levels, provided in Section III, indicates that the Local ICI plan is expected to maintain a significant level of surplus for the foreseeable future. It is therefore reasonable to continue waiving the premium contribution on this plan for the near term.

Table 1.2 Local ICI Fund Balances			
Balance Sheet Component	Valuation Date		
	December 31, 2018	December 31, 2019	December 31, 2020
Beginning Balance	$38,951,707	$38,914,553	$39,603,652
Closing Adjustments	9,429	(4,151)	(2,673)
Adjusted Beginning Balance	38,961,136	38,910,402	39,600,979
Plus: Premium Contributions	0	0	0
Plus: Investment Earnings	1,854,114	2,804,346	4,058,283
Less: Insurance Claims	1,427,926	1,649,419	1,560,355
Less: Administrative Expenses	472,772	461,677	497,633
Ending Balance	38,914,553	39,603,652	41,601,274
Actuarial Liability	5,966,337	5,970,710	6,797,975
Surplus / (Deficit)	$32,948,215	$33,632,942	$34,803,299

Section II: Actuarial Valuation

The actuarial liabilities for the Local ICI Plan consist of three components:

- Liability for Open Claims: The present value of expected future benefits payable to members disabled prior to December 31, 2020, whose claims had been reported to ETF on or before that date. There were 96 open claims and no pending claims reported as of the valuation date.

- Liability for Incurred but not Reported (IBNR) Claims: The present value of expected future benefits payable to members disabled prior to December 31, 2020, but whose claims had not yet been reported to ETF as of that date.

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

The following table compares the liabilities for the Local ICI plan as of December 31, 2019 and December 31, 2020:

Table 2.1
Current Year and Prior Year Liabilities for the Local ICI Plan

Component	December 31, 2019	December 31, 2020
Open Claims	$5,312,948	$6,019,867
IBNR Claims	$312,651	$389,587
Loss Adjustment Expense	$345,111	$388,521
Total	**$5,970,710**	**$6,797,975**

The total liability increased by 13.9% from $6.0 million as of December 31, 2019 to $6.8 million as of December 31, 2020. This was driven primarily by an increase in the liability for open claims.

The liability for open claims increased by 13.3% from $5.3 million December 31, 2019 to $6.0 million as of December 31, 2020. The number of open claims increased by 6.7% from 90 as of December 31, 2019 to 96 as of December 31, 2020, and the average net benefit amount increased by 2.9% from $1,667 as of December 31, 2019 to $1,716 as of December 31, 2020.

The increase in the IBNR liability is due to an increase in incurred claims observed in recent years, which is directly related to the increasing trend in the number of open claims.

The increase in the loss adjustment expense liability is driven, in part, by the new per claim per month administrative expense assumption and by the increase in the number of open and IBNR claims.

The December 31, 2020 liabilities are discussed in greater detail below, and Appendix D of this report includes additional documentation of the assumptions used in our analysis.

Open Claims

The liability for open claims was calculated using the same claim termination rate assumptions as last year. These claim termination rate assumptions are based on the 2012 Group Long-Term Disability Valuation Table adjusted for ICI plan experience. The adjustment factors were developed from experience studies performed by Milliman using State ICI claim experience from 2014 through 2019, and are provided in Appendix D. The experience studies were performed using State ICI experience because Local ICI claim experience has been volatile due to the small size of the plan, and is not considered credible for developing valuation assumptions.

The estimated offset assumptions are also the same as last year and are based on results from an experience study performed by Milliman using plan experience from 2016 through 2019. The estimated offset assumptions are provided in Appendix D.

A 7.0% discount rate was used to compute the liability for open claims. This discount rate was prescribed by ETF and we have performed no independent assessment of the reasonableness of this assumption.

We tested these assumptions, other than the discount rate, by performing retrospective runoff tests using State ICI claim experience from 2016 through 2020, because historical Local ICI experience has been volatile due to the small volume of open claims, and we do not consider the experience credible for validating the assumptions. We believe that the State ICI runoff tests provide a reasonable basis for validating the assumptions for open Local ICI claims, because the Local and State ICI plans have similar plan designs and both are administered by The Hartford, so presumably the claim practices are similar.

In performing the runoff tests, we calculated liabilities for claims that were open on prior valuation dates using the 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 liability for claims still open at the end of the study period. The results from the runoff studies are shown below, summarized as the combined result from five mutually distinct 12-month studies using State ICI experience from 2016 through 2020.

Table 2.2 Runout Study for the ICI Plans Study Period: 2016 – 2020	
Claim Duration	Average Annual Margin
1 – 12 months	1.1%
13 – 24 months	10.1%
25 – 36 months	3.6%
37 – 48 months	2.7%
49 – 60 months	1.2%
61 + months	2.3%
Total	**2.5%**

In the preceding table, a positive average annual margin indicates the estimated liability would have provided adequate funding for the runout of open claims during the study period, while a negative average annual margin indicates a deficiency. For the State and Local ICI plans, we target a positive overall average annual margin of 1% to 5%, with reasonably consistent patterns by claim duration. The results in the preceding table show that the current valuation assumptions meet our overall objective, although there is some variation by claim duration. The 10.1% average annual margin in durations 13 – 24 months may be due to the change in the definition of disability from short-term disability to long-term disability after 12 months. It is not uncommon to see a spike in claim termination rates when the definition of disability changes from an STD to an LTD definition because some STD claims may not be approved for LTD benefits.

The Local ICI Plan provides an additional benefit of $75 per month to disabled employees whose disability lasts longer than 12 months, to help these employees with medical fees. The $75 monthly benefit is already included in the reported benefit amounts of employees disabled for 12 months or more as of the valuation date. Therefore, the additional liability for these claims was included as part of the open claim liability calculation. For employees that were disabled for fewer than 12 months as of the valuation date, the additional liability was determined using the same methods used in the open claim liability calculations. The additional liability for these claims was estimated to be $40,568 as of December 31, 2020.

IBNR Claims

The liability for IBNR claims reflects the expected cost of claims incurred prior to December 31, 2020 that had not been reported as of that date. For example, if, on average, claims are reported 6 months after the date of disability, then the IBNR liability would be approximately 50% of the expected total cost of new claims for the year.

We have assumed that 25% of claims incurred in 2020 were unreported as of December 31, 2020. This is the same assumption as last year and was determined from an analysis performed by Milliman of the percentage of unreported claims at year end, using Local ICI claim experience from 2015 through 2019. We also assumed that the total cost of claims incurred in 2020 was $1.6 million, based on an analysis of Local ICI incurred claim costs from 2015 through 2019. The December 31, 2020 liability for IBNR claims was then determined from these assumptions as follows:

Table 2.3 Liability for Local ICI IBNR Claims as of December 31, 2020	
A. Estimated Incurred Claims	$1,558,350
B. Estimated Proportion of Unreported Claims	25.0%
C. IBNR Liability as of December 31, 2020 (A x B)	$389,587

Loss Adjustment Expense

The December 31, 2020 liability for loss adjustment expenses was calculated using the per claim per month fees specified by The Hartford in its response to the 2020 request for proposals for administering the ICI program. These assumptions are different than the assumptions used last year, and are provided below in Table 2.4. We have included last year's expense assumptions for comparison.

Table 2.4 Assumed Claim Administration Fees		
Component	12/31/2019 Assumption	12/31/2020 Assumption
One-time new claim fee	$600 per new claim	$1,488 per new claim
Monthly fee, first two years	$145 per month	$130 per month
Monthly fee, years 3 +	$50 per month	$66 per month

We calculated the loss adjustment expense liability for open claims as the present value of expected future administration fees using the same claim termination rate assumptions that we used to calculate the open claim liability. We performed a similar calculation for IBNR claims by assuming 35 claims were incurred but not reported as of December 31, 2020 for which we have assumed the one-time new claim fee applies and had not yet been paid as of the valuation date. The following table provides details of the liability calculation for loss adjustment expenses as of December 31, 2020.

Table 2.6 Liability for Loss Adjustment Expenses	
Claim Type	Estimated Liability
Open claims	$315,921
IBNR claims	$72,600
Total	$388,521

This approach is similar to the approach we used last year for computing the loss adjustment expense liability, but we adjusted the fee schedule to reflect the per claim per month fees reported by The Hartford in 2020.

Section III: Discussion of Local ICI Funding Levels

The December 31, 2020 actuarial valuation of the Local ICI plan includes an analysis of current and future funding levels. The following table shows the fund balances as of the three most recent fiscal year-ends:

Table 3.1 Local ICI Fund Balances			
Balance Sheet Component	Valuation Date		
	December 31, 2018	December 31, 2019	December 31, 2020
Beginning Balance	$38,951,707	$38,914,553	$39,603,652
Closing Adjustments	9,429	(4,151)	(2,673)
Adjusted Beginning Balance	38,961,136	38,910,402	39,600,979
Plus: Premium Contributions	0	0	0
Plus: Investment Earnings	1,854,114	2,804,346	4,058,283
Less: Insurance Claims	1,427,926	1,649,419	1,560,355
Less: Administrative Expenses	472,772	461,677	497,633
Ending Balance	38,914,553	39,603,652	41,601,274
Actuarial Liability	5,966,337	5,970,710	6,797,975
Surplus / (Deficit)	$32,948,215	$33,632,942	$34,803,299

The December 31, 2020 reserve balance is equal to 612% of the actuarial liability, which is significantly higher than the reserve target of 150% established by the Board for the Local ICI plan. Reserve balances have increased over the past several years because investment income on reserves was greater than the claim costs (i.e., benefits and expenses) in those years. For this reason, and because of the surplus in recent years, premium contributions have been waived since 2012.

We have prepared financial projections to evaluate the long-term performance of the Local ICI fund. The projections are provided in Appendix A and reflect actual results for 2020 and projected values in 2021 and beyond. The key elements of our financial projections include the following:

- Beginning Balance: The projected beginning balance for each year is equal to the prior year's ending balance.

- Payroll: Since Local ICI payroll was not available, we estimated current payroll based on payroll data for the State ICI plan and by assuming that the ratio of incurred claims to payroll is similar for both programs. Future payroll is assumed to increase 3.0% per year, which is consistent with the assumptions used by ETF for retirement fund projections.

- Premium Contributions: Premiums are assumed to be waived in all future years given the plan's significant surplus.

- Investment Income: Investment income reflects an interest rate assumption of 7.0% throughout the projection period, specified by ETF.

- Insurance Claims: Annual paid insurance claims are the sum of projected payments on existing claims as of December 31, 2020, and of payments on expected future claims incurred after December 31, 2020. Insurance claims for 2021 and beyond are based on historical experience of 0.58% of payroll, increased by 10% to add margin, and adjusted for expected aging in future years. 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 2020.

- Ending Balance: The ending 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, 2020 and of the increasing liability for claims incurred after December 31, 2020.

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

Our projections indicate that the Local ICI plan is expected to maintain a significant level of surplus for the foreseeable future. The expected investment income on reserves exceeds the cost of expected claims and expenses each year. It is therefore reasonable to continue waiving the premium contribution on this plan for the near term.

In 2019, the Board approved a reserve target of 150% of the actuarial liability for the Local ICI plan. Based on our financial projections, the reserve balances are expected to exceed this target in every future year of the projection.

Please note that these projections 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

Baseline Scenario: Premium contributions waived throughout the projection period.

Local ICI Funding Analysis as of December 31, 2020
Baseline Scenario
Premium contributions waived throughout the projection period

Calendar Year	2020	2021	2022	2023	2024	2025	2026	2027
BOY Fund Balance	$39,600,979	$41,601,274	$42,270,399	$42,801,387	$43,184,568	$43,308,397	$43,185,426	$42,816,990
Premium Contributions	$0	$0	$0	$0	$0	$0	$0	$0
Investment Income	$4,058,283	$2,912,089	$2,958,928	$2,996,097	$3,022,920	$3,031,588	$3,022,980	$2,997,189
Total Revenues	$4,058,283	$2,912,089	$2,958,928	$2,996,097	$3,022,920	$3,031,588	$3,022,980	$2,997,189
Insurance Claims	$1,560,355	$1,700,603	$1,840,851	$1,981,098	$2,198,074	$2,391,770	$2,571,352	$2,756,428
Carrier Administrative Expenses	$345,842	$376,927	$408,012	$439,097	$487,188	$530,119	$569,923	$610,943
Administrative Expense	$151,791	$165,434	$179,078	$192,721	$213,828	$232,671	$250,141	$268,145
Total Operating Expenses	$2,057,988	$2,242,964	$2,427,940	$2,612,916	$2,899,090	$3,154,560	$3,391,415	$3,635,516
Net Change in Fund Balance	$2,000,295	$669,125	$530,988	$383,181	$123,830	($122,972)	($368,436)	($638,327)
EOY Fund Balance	$41,601,274	$42,270,399	$42,801,387	$43,184,568	$43,308,397	$43,185,426	$42,816,990	$42,178,663
Actuarial Liability	$6,797,975	$7,232,678	$7,703,088	$8,587,263	$9,351,667	$10,091,539	$10,828,386	$11,574,840
Surplus / (Deficit)	$34,803,299	$35,037,721	$35,098,299	$34,597,305	$33,956,730	$33,093,887	$31,988,603	$30,603,823
Ratio EOY Fund Balance to Liability	612%	584%	556%	503%	463%	428%	395%	364%

Appendix B: Plan Description

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

- Elimination Period: Participating employees select an elimination period up to 180 days. Benefits are reduced for any vacation, sick leave, holiday or compensation pay received after the elimination period.

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

Age at Disablement	Maximum Benefit Period
Before age 62	To Age 65
62	3.50 years
63	3.00 years
64	2.50 years
65	2.00 years
66	1.75 years
67	1.50 years
68	1.25 years
69	To Age 70

- Benefit Amount: The Standard benefit provides up to 75% of a participant's average monthly earnings, capped at $4,000 per month. Supplemental Coverage is available to employees whose annual salary exceeds $64,000, and provides an additional benefit up to $3,500 per month. For disabilities lasting longer than 12 months, a supplement of $75 per month is added to the normal benefit amount.

- 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 Standard Coverage are paid by the employer and the employee. Premiums for Supplemental Coverage are paid entirely by the employee.

Appendix C: Data for Valuation

The following tables show the distribution of open claims as of December 31, 2020 by year of disability and gender, and by age at disability and gender.

Number of Open Local ICI Claims as of December 31, 2020 By Year of Disability and Gender			
Disability Year	Male	Female	Total
2001 and earlier	1	2	3
2002	1	-	1
2003	1	-	1
2004	1	2	3
2005	1	2	3
2006	1	1	2
2007	-	-	-
2008	-	-	-
2009	2	2	4
2010	4	-	4
2011	2	-	2
2012	-	-	-
2013	1	1	2
2014	1	3	4
2015	4	6	10
2016	7	-	7
2017	2	1	3
2018	4	2	6
2019	5	5	10
2020	12	19	31
Total	50	46	96

Number of Open Local ICI Claims as of December 31, 2020 By Age at Disability and Gender			
Age at Disability	Male	Female	Total
< 20	0	0	0
20-24	0	0	0
25-29	2	2	4
30-34	7	4	11
35-39	6	1	7
40-44	9	6	15
45-49	9	8	17
50-54	6	11	17
55-59	9	9	18
60-64	2	4	6
65+	0	1	1
Total	50	46	96

The following tables show the distribution of net monthly benefit amounts as of December 31, 2020 by year of disability and gender, and by age at disability and gender.

Local ICI Net Monthly Benefit Amounts as of December 31, 2020 By Year of Disability and Gender			
Disability Year	Male	Female	Total
2001 and earlier	$366	$1,604	$1,970
2002	1,122	-	1,122
2003	3,023	-	3,023
2004	556	1,703	2,259
2005	137	265	402
2006	857	192	1,049
2007	-	-	-
2008	-	-	-
2009	215	1,417	1,632
2010	8,938	-	8,938
2011	3,959	-	3,959
2012	-	-	-
2013	268	67	335
2014	510	4,354	4,864
2015	5,097	3,802	8,900
2016	10,720	-	10,720
2017	2,510	321	2,831
2018	5,306	2,023	7,329
2019	15,165	7,086	22,251
2020	34,915	48,218	83,133
Total	$93,664	$71,054	$164,718

Local ICI Net Monthly Benefit Amounts as of December 31, 2020 By Age at Disability and Gender			
Age at Disability	Male	Female	Total
< 20	$0	$0	$0
20-24	0	0	0
25-29	6,075	5,650	11,725
30-34	23,001	2,404	25,405
35-39	11,632	4,691	16,322
40-44	12,925	6,279	19,204
45-49	11,743	15,128	26,871
50-54	10,691	19,785	30,476
55-59	13,661	9,415	23,076
60-64	3,937	7,143	11,080
65+	0	560	560
Total	93,664	71,054	164,718

Appendix D: Actuarial Methods and Assumptions

- Valuation Date: December 31, 2020

- Discount Rate: 7.0%, specified by ETF. This assumption represents a long-term investment return for the Local ICI reserve.

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

Disability Duration	2012 GLTD Termination Rate Adjustment Factor
1 – 9 months	1.25
10 – 12 months	2.50
13 – 24 months	1.25
25 – 60 months	0.98
61 + months	0.96

- Future Offset Approval Rates: Estimated Social Security offset assumptions were derived from historical State ICI experience and are shown below.

  Probability of being approved for Social Security benefits (if not already approved):

Claim Duration	Probability
1 – 12 months	67%
13 – 24 months	58%
25 – 36 months	45%
37 – 48 months	35%
49 – 60 months	9%
61 + months	0%

  No future offsets are assumed on claimants disabled more than five years.

  Future Social Security offset amount as percentage of gross benefit amount: 45%.

- Incurred But Not Reported Claims: 25% of the estimated incurred claims for the current year, as determined from analyses of historical Local ICI claim experience.

- Overpayment Credit: 75% of the overpayment balance reported by ETF as of December 31, 2020. We assume that 75% of the December 31, 2019 overpayment balance will eventually be recovered, and we applied this amount as an offset to the total liability. This assumption was based on an analysis of historical overpayment balances and recoveries from December 31, 2012 through December 31, 2016.

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

Assumed Claim Administration Fees	
Component	Fee
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 were incomplete or inaccurate, the results of our work may be materially affected.

The principal items on which we relied included the following:

- Lists of active disability claims and related information provided by The Hartford

- Asset balances, premium contributions, plan expenses, and other financial information provided by ETF

- Plan descriptions provided by ETF

- Discussions with ETF and personnel at The Hartford